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BRITISH MUSEUM.

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A GUIDE

TO THE

EXHIBITION ROOMS

OF THE

DEPARTMENTS OF

NATURAL HISTORY AND ANTIQUITIES.

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PRINTED BY ORDER OF THE TRUSTEES.

1867.

PRICE SIXPENCE.

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THE present "Guide" gives a concise account of the contents of the exhibition rooms in the several departments of Zoology, Minerals, Fossils, Botany, and Antiquities, in the British Museum, and is intended to supply such information as is necessary for the generality of visitors to the collections, in addition to that which is furnished by the labels attached to the various objects.

A Synopsis, which is to be published hereafter, will give a fuller description of these collections, accompanied by scientific and literary notes, and illustrated by wood-engravings.\*

J. WINTER JONES,

*Principal Librarian.*

BRITISH MUSEUM,

18 July, 1867.

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IN the year 1753 an Act of Parliament was passed (26 Geo. II. cap. 22), enacting that the collections formed by Sir Hans Sloane, as well as the Cottonian and Harleian collections of Manuscripts, should be vested in certain Trustees, and, together with such additions as might be made to them, placed in one general repository, to be there preserved for public use to all posterity. The Trustees were incorporated under the name of "Trustees of the BRITISH MUSEUM," with power to make such regulations as they deemed fit for the preservation and inspection of the collections, the care and custody of which were chiefly committed to the "Principal Librarian," who was to be continually aided in the execution of his duty by such officers as should be appointed for that purpose.

Montague House was purchased by the Trustees in 1754 for a general repository, and the collections were removed to it under the above Act of Parliament. On the 15th of January, 1759, the British Museum was opened for the inspection and use of the public. At first the Museum was divided into three departments, viz., Printed Books, Manuscripts, and Natural History; at the head of each of them was placed an officer designated an "Under Librarian."

The increase of the collections soon rendered it necessary to pro-

\* See the part relating to the First Vase-Room, already published, price one penny.

vide additional accommodation for them, Montague House proving insufficient. The present by George III. of Egyptian Antiquities, and the purchase of the Hamilton and Townley Antiquities, made it more-over imperative to create an additional department—that of Antiquities and Art—to which were united the Prints and Drawings, as well as the Medals and Coins, previously attached to the library of Printed Books and Manuscripts. The acquisition of the Elgin Marbles in 1816 made the Department of Antiquities of the highest importance, and increased room being indispensable for the exhibition of those marbles, a temporary shelter was prepared for them. This was the last addition to Montague House.

When, in 1823, the library collected by George III. was presented to the nation by George IV. it became necessary to erect a building fit to receive this valuable and extensive collection. It was then decided to have an entirely new edifice to contain the whole of the Museum collections, including the recently-acquired library. Sir R. Smirke was accordingly directed by the Trustees to prepare plans. The eastern side of the present structure was completed in 1828, and the Royal Library was then placed in it. The northern, southern, and western sides of the building were subsequently added, and in 1845 the whole of Montague House and its accessions had disappeared; while the increasing collections had rendered it necessary to make various additions to the original design of Sir R. Smirke, some of them even before it had been carried out. The most extensive addition, however, is that erected in the inner quadrangle under the superintendence of Mr. Sydney Smirke (who had some time previously succeeded his brother Sir Robert as architect to the Museum). This new building contains the Reading Room and accommodation for the future increase of the collection of Printed Books.\*

In 1827 a fifth department—that of Botany—was created, in consequence of the bequest by Sir Joseph Banks of his botanical collections (besides his library of about 16,000 volumes).

In 1837 the Prints and Drawings were separated from the Antiquities, and became an independent department, and at the same time the Department of Natural History was divided into two, one of Geology, including Palæontology and Mineralogy, the other of Zoology. In 1857 Mineralogy was constituted a separate department. In 1856 the office of Superintendent of the Natural History Departments was created. At the end of the year 1860, the Department of Antiquities was separated into three; and recently one of these has been subdivided into two. At present the Museum is divided into eleven departments, viz., Printed Books, Manuscripts, Oriental Antiquities, British and Mediæval Antiquities and Ethnography, Greek and Roman Antiquities, Coins and Medals, Botany, Prints and Drawings, Zoology, Palæontology, Mineralogy, each under the immediate care of an "Under Librarian" as keeper.

\* See the description of the New Reading Room and Libraries, sold in the Museum, price one penny.



Visitors proceed to the several rooms herein described from the entrance hall, on the western side of which is the principal staircase to the upper floor. Against the wall to the left of the staircase is a marble bust of Charles Townley, Esq., by Nollekens, and a statue by Westmacott of the Hon. Mrs. Seymour Damer, holding in her hands a small figure of the genius of the Thames, sculptured by herself. Between these objects is the doorway to the sculpture galleries. On the eastern side of the Hall are two marble statues: Shakspeare by Roubilliac, and Sir Joseph Banks by Chantrey; between these is the doorway to the Grenville Library.

To inspect the several collections in the order in which they are described in the present Guide, the visitor will ascend to the upper floor by the principal staircase, and enter the exhibition rooms of the Zoological Department. These rooms form part of the southern, the whole of the eastern and part of the northern sides of the upper floor. The Minerals and Fossils which are next described, are contained in the remaining part of the northern side. The Botanical exhibition is displayed in two rooms in the southern front of the building, which are entered by a doorway on the eastern side of the central saloon in the Zoological Department.

Following still the order of the Guide, the visitor will descend the principal stairs to the hall, and enter the Department of Antiquities by the doorway already mentioned, near the south-western angle. The antiquities occupy the whole of the western parts of the ground floor, several rooms connected therewith on the basement, and the western side of the upper floor.

Should visitors wish to proceed at once to any particular part of the exhibition, instead of following the course of the Guide, a reference to the plans of the two principal floors of the Museum prefixed to this work will enable them to do so.

In addition to the parts of the building already indicated, the Grenville room, the Manuscript Saloon and the Royal Library are open to visitors on public days.

The entrance to the Grenville room is on the eastern side of the hall, under the clock. In this room is deposited the splendid library bequeathed to the nation in 1847 by the Right Hon. Thomas Grenville, a marble bust of whom, by Comolli, stands in a recess on the southern side. Here, as well as in the Royal library, are exhibited various printed books, selected to show the progress of the art of printing, with specimens of ornamental and curious binding.\* From the Grenville library the visitor proceeds to the Manuscript Saloon, where selections of manuscripts, charters, autographs, and seals are arranged for inspection.\* The visitor next enters the Royal library, and here, besides the printed books already mentioned, are exhibited some interesting and valuable specimens from the department of prints and drawings.\*

J. W. J.

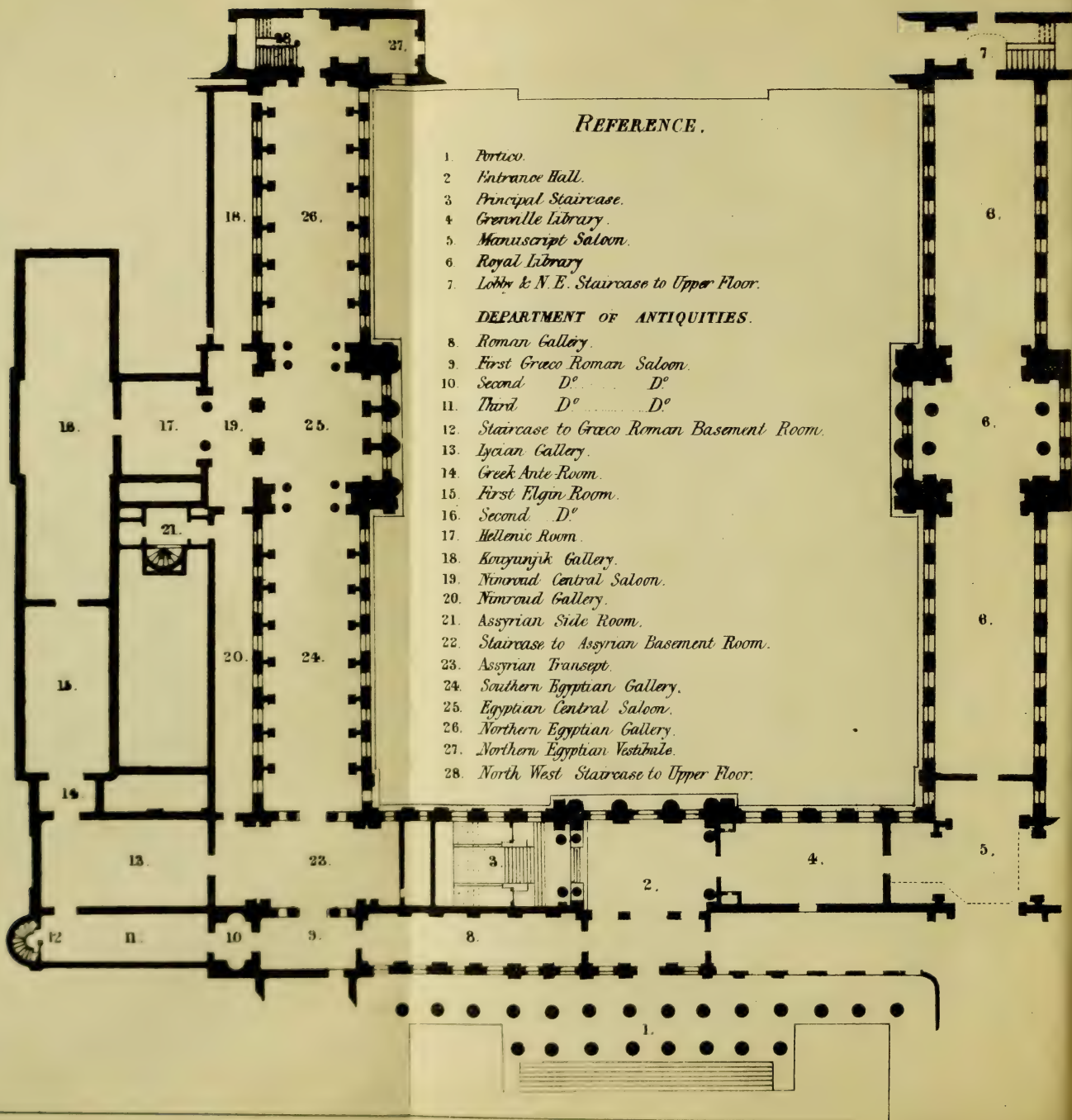
\* See the several Guides to these exhibitions, separately printed and sold in the Museum, price one penny each.

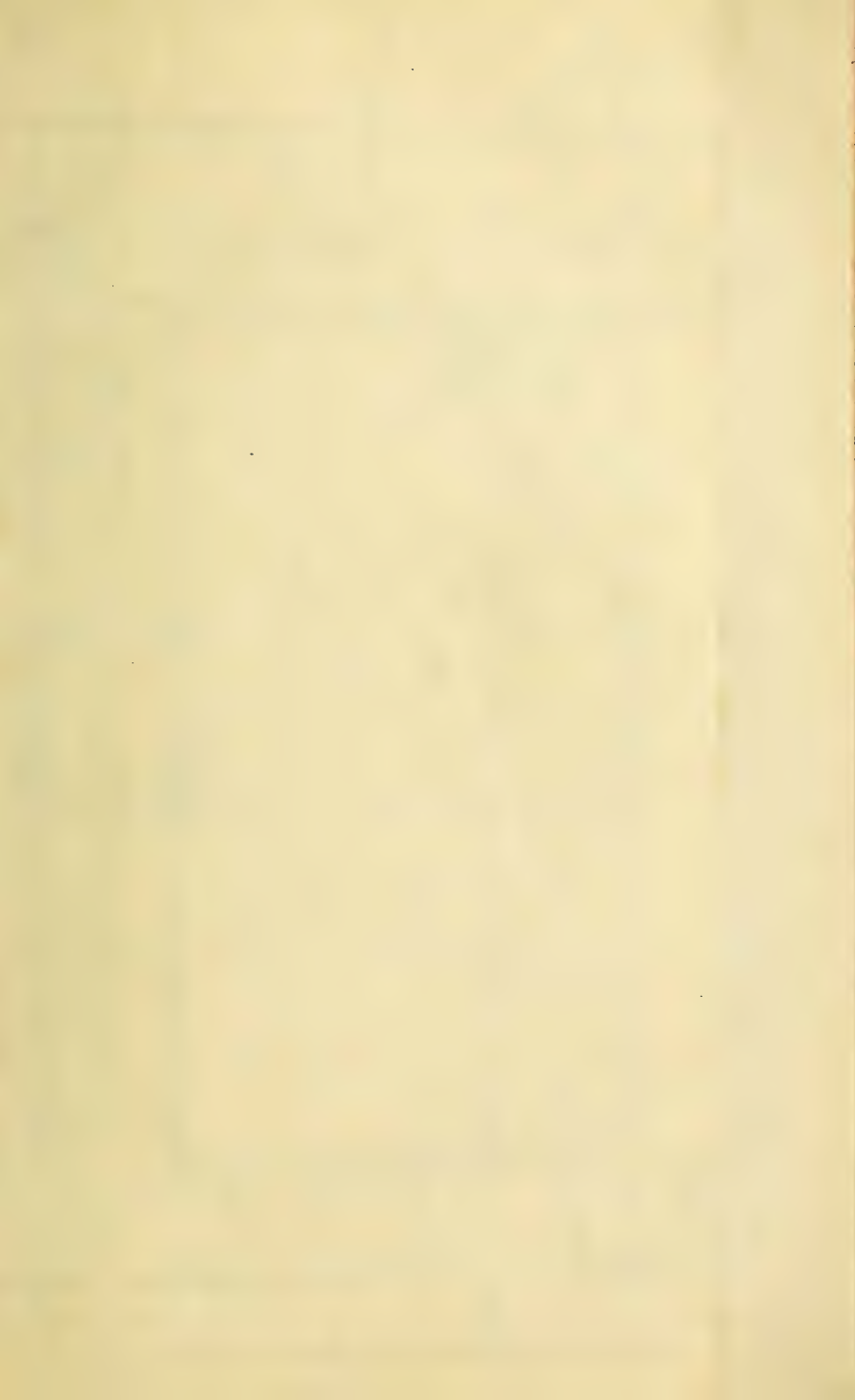




# BRITISH MUSEUM.

## EXHIBITION ROOMS, GROUND FLOOR.

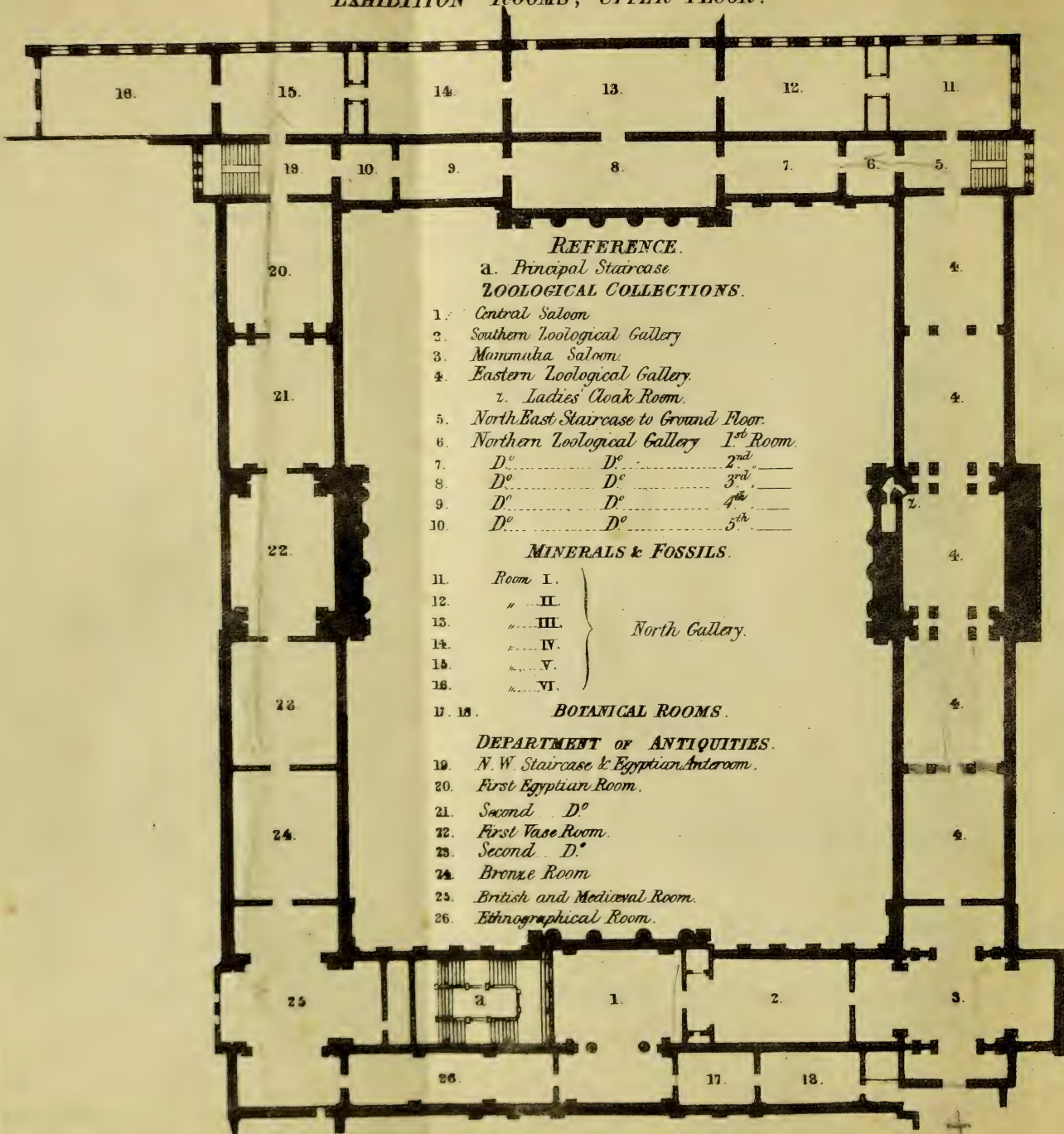






# BRITISH MUSEUM.

## EXHIBITION ROOMS, UPPER FLOOR.



# THE ZOOLOGICAL COLLECTIONS.

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THE collection of specimens selected for exhibition, from the existing classes of Animals, is contained in three Galleries ; and, for the convenience of exhibition, is arranged in two series. The BEASTS, BIRDS, REPTILES, and FISHES, are exhibited in the Wall Cases. The hard parts of the Radiated, Molluscous, and Annulose Animals, (as SHELLS, CORALS, SEA-EGGS, STARFISH, CRUSTACEA,) and INSECTS, and the EGGS of BIRDS, are arranged in a series in the Table Cases of the several Rooms.\*

The names and numbers of the Rooms are placed over the doorways in each apartment, and the numbers of the cases over the glass frames.

The specimens are labelled with the scientific name, the English name when they have one, the country whence they come, and, when they have been presented, with the name of the donor.

The General Collection of MAMMALS, or Beasts which suckle their young, is arranged in three Rooms, the Hoofed Beasts (*Ungulata*) being contained in the CENTRAL SALOON and SOUTHERN ZOOLOGICAL GALLERY, and the Beasts with claws (*Unguiculata*) in the MAMMALIA SALOON.

## 1. THE CENTRAL SALOON.

In the WALL CASES of this *Saloon* are exhibited the specimens of the Antelopes, Goats, and Sheep. The Cases between the doorways contain the Bats, or *Cheiroptera*. Some of the larger Mammalia are placed on the floor, such as the Giraffes or Camelopards of North and South Africa, and the Morse or Walrus from the North Sea.

\* For a more detailed and scientific explanation of the Zoological Collection, there is published a series of Catalogues, which may be purchased in the Principal Librarian's Office at the Museum, or at any Bookseller's. A List of these Catalogues, with the prices, is at the end of this Guide.

In the Case between the columns are specimens of the full-grown male Gorilla, of the female, and of a young male. They are from the Gaboon, Equatorial Africa. Over the Cases of the Antelopes and Bats are placed the horns of the different species of Oxen, the largest of which are those of the Arnee, or Great Indian Buffalo.

The Antelopes are beasts with hollow horns, and chew the cud; they are chiefly of a sandy colour, and are specially fitted to inhabit extensive plains with tracts of desert; a few of the species live among rocks, where they are as sure-footed as the Goat. They are most abundant in Africa, especially in the southern districts. A few are found in India, while in North America and Europe there is but a single species in each, the Prong-horn in the former, and in the latter the Chamois which frequents the Alps. Among the more interesting species may be pointed out the Water-buck, and Sable Antelope; the Oryx, which, when seen in profile, probably suggested the Unicorn mentioned by the ancients; the Blessbok, Hartebeest, and Sassaybe of South Africa; the large-eyed Gazelle, so often referred to by Eastern poets; the Springbok, so called from its springing bounds, when the white fur of its back opens out like a sheet; the Gnu, which at first seems a compound of Horse, Buffalo, and Antelope; the Sasing, or Indian Antelope, with its curious cheek-pores; the Wood Antelopes, with their short horns, often concealed amongst a brush of hairs; the Chickara of India, with its four little horns.

The different kinds of Wild Sheep (Cases 9 to 11) from the mountains of Asia, North America, and North Africa: one of the most remarkable is the Bearded Sheep, or Aoudad of Morocco, which has enormous strength in its neck and horns; these are of great size in the gigantic Argali.

The various kinds of Wild Goats of Siberia, India, and Europe, and some of their domestic varieties (Cases 6 to 8); the Cashmere and Angora Goats, celebrated for the delicate wool growing among their hair, which is manufactured into the finest shawls.

The Giraffes are fitted, by their long legs and necks, and extensile lips and tongues, to browse on the twigs of high trees; while the Antelopes, Goats, and Sheep, with their short necks and blunt lips, browse chiefly on low shrubs, or graze.

The Bats, which have the skin extended between the fingers of their fore-limbs, fly about in the dusk and at night; they feed chiefly upon insects; some of the larger species, often called *Fox-bats*, or *Flying Foxes*, have blunt grinding teeth, and only eat fruit. They are found in Africa, in the islands of the Indian Archipelago and the Pacific, and in Australia, where some of them live in large flocks. The *Horse-shoe Bats* and *Leaf-nosed Bats* have very peculiar physiognomies, from the complicated apparatus on the end of the nose round the nostrils. Though the Bats are generally sombre-coloured, yet a few have brilliantly-coloured furs, such as the little orange Port Essington Bat, and some of the Fox-bats. The Vampyres, or Blood-sucking Bats, are confined to South America; they have a very long tongue, and a deep notch in the lower lip. They attack animals and



sometimes even men while sleeping, and fan the victims with their wings. They are of small size, but the wounds which they inflict often continue to bleed after the Bats are satiated, and all wounds are dangerous in a warm climate.

## 2. THE SOUTHERN ZOOLOGICAL GALLERY.

In the WALL CASES of this Gallery is exhibited the continuation of the collection of the Hoofed Quadrapeds, as the Oxen, Elands, Deer, Camels, Llamas, Horses, and the various species of Swine. Here also are placed the species of Armadillo, Manis, and Sloth, remarkable for the length and strength of their claws. On the top of the Wall Cases are the horns of different species of Antelopes, and on the floor are arranged the different species of Rhinoceros from South Africa and India; a small specimen of the Indian Elephant; a specimen of a very young African Elephant, remarkable for the large size of its ears; specimens of the young, half-grown, and adult Hippopotamus from South Africa; and the Wild Oxen from India and Java.

Cases 1 and 2. The Llamas, used as beasts of burden in some parts of South America, and one species furnishes an excellent wool. The wild species are brown, while the domesticated kinds are black, white, or brown, and are often variegated. The Camels, remarkable for their stomachs complicated with cells for holding water, and for their humps, which are stores of nutriment, whereby they are fitted for long journeys across the desert.

Cases 3 to 10. Oxen. Among them may be specified the White Wild Bull from Chillingham Park; the Lithuanian Bison, or Aurochs, which in ancient times inhabited the European forests, but is now nearly extinct, a few only having been preserved by the care of the Russian Emperors; the American Bison, or "Buffalo," which still wanders in great herds over the prairies of North America; the Musk Ox, limited to Arctic America, where, with its peculiar head and feet, it manages to find food even during the long winter of those regions; the Yak of Thibet, the tail of which is used as a fly-flap by the Asiatics, and the curious Nepalese Budorcas.

Cases 10 to 16. The continuation of the series of Antelopes, such as the African Eland, the giant of the group; the Bontebok, with its inscribed sides; the fine striped Strepsiceros, with its spiral horns; the Nylghau, often called the Horned Horse of India; and the Anoa of Celebes. In these Cases are also contained the Thick-skinned Beasts, as the Tapirs of America and Sumatra; the African Swine, with warts on the head, and formidable tusks; the Babyroussa, with its recurved horn-like tusks; the social South American Peccaries, with the pore on their backs, emitting a fœtid odour. All these animals have muscular and callous noses, which fit them well for grubbing in the ground. The curious Hyrax, one of the species of which is the Coney of Scripture: in structure it resembles a diminutive Rhinoceros. The Shielded Beasts, as the Manis, or Scaly Ant-eaters of India and

Africa, with their very long claws, which are turned in when they walk; the burrowing Armadilloes of South America, which, when danger threatens, can roll themselves into a ball, covered with their jointed mail, whence they have derived their name. The Aard Vark, or Ground Pig of South Africa, which burrows in ant-hills. The Ant-eaters of South America, which are covered with hair, and have a very long thread-shaped tongue, which they extend into ant-hills, and, when covered with ants, draw into their mouths. The Porcupine Ant-eater, or Echidna of Australia, with its armature of spines, and the Duck-billed Platypus of the same country, often called the Water Mole, as it burrows in the banks of streams, and is a good swimmer. The Sloths of South America, peculiarly organized for a forest life; living entirely among trees, and crawling on the under side of the branches.

Cases 17-30 contain the Deer, Musks, and Horses. In the Deer the horns, which, except in the Reindeer, are confined to the males, are solid and deciduous: they are annually shed and reproduced. The Stag and Fallow Deer of Europe, the large Wapiti of North America, the Reindeer and Elk of Northern Europe and America, the Rusa and spotted Axis of India, and the Brazilian Coassus. The Musks with their peculiar fur and musk bag; they are hornless, and have large canine teeth.

The Horse tribe with their solid hoofs, such as the Quagga, and the finely-banded Zebras of South Africa; the wild Asses of Asia.

On the floor are specimens of the Indian Rhinoceros, with its thick hide in deep folds, and a single horn on the nose; the African Rhinoceros, the different species of which have two horns on the nose, and smooth hide, without plaits or folds. The Hippopotamus of the African rivers, with its formidable mouth and massive bulk. The two species of Elephants—the African, with enormous ears, and the Indian, so easily tamed and rendered useful to man. The bulky Nepalese Gour, and the fierce Cape Buffalo, with its front of horn.

### 3. MAMMALIA SALOON.

In the WALL CASES of this SALOON are arranged the specimens of Handed, Rapacious, Glirine, and Pouched Beasts, and over the Cases are the different kinds of Seals, Manatees, and Porpoises; and arranged in Table Cases are the general collections of Corals.

The Handed or Quadrumanous Beasts occupy Cases 1-20; the Rapacious and Marsupial Beasts, Cases 21-64; and the Glires, or Gnawing animals, Cases 65-81.

Cases 1-20. The Primates or Handed Beasts, exclusively natives of the warmer parts of the globe, and particularly organized for a life among trees. They are often called Quadrumana, from their four extremities having, in most cases, a thumb opposed to the other toes, so that they are able to lay hold, as it were, with four hands. The Monkeys of the Old World are chiefly distinguished by the very slight division between their nostrils. The Chimpanzees of West Africa are black; the great Gorilla of the Gaboon is fuscous and

partly gray; while the Orangs of Borneo and the Eastern Islands are red-haired. They are often called Anthropoid Apes, from having some resemblance to man, but this likeness decreases with age. They live chiefly on fruits, and from their size and strength are formidable when attacked. The long fore-arms of the Gibbons are very useful to them among trees. The Semnopithec, Cercopithec, and Colobi of the Old World are Monkeys with long tails; one of the most remarkable is the Proboscis Monkey of Borneo, with its singular long nose; here also may be noticed the Entellus, or Sacred Monkey of the Hindoos, which is religiously preserved about their sacred enclosures; the Douc, with its finely-contrasted colours; and the Colobi, so called from their fore-hands wanting the thumb; of these the most handsome is the Abyssinian Guereza, with long white hairs flowing over its sides and with the white tail contrasting strongly with the deep black fur. The skin of this Monkey is used to ornament the shields of the Abyssinian Chiefs. The Barbary Ape has been introduced on the rock of Gibraltar, and is the only Monkey found in Europe. The Black Wanderoo, with its grey wig, is a conspicuous species found in Ceylon and Southern India.

The Baboons have elongated muzzles, somewhat like dogs, hence their names of Cynocephali or Dog-headed. They are natives of Africa; the most conspicuous are the Chacma, Anubis, the Tartarin, so frequently represented on the Egyptian monuments, and the Mandrill or Rib-nosed Baboon, from West Africa, one of the specimens being the identical "Happy Jerry," which used to amuse the visitors at Old Exeter Change.

Cases 13-18 contain the American Monkeys, distinguished by the broad space between their nostrils, and by their tails being generally prehensile, which assists them in climbing. Some of these have very long legs, and want the thumb of the fore-hand; from their slimness they are called Spider Monkeys. The Howlers are so called from the loud cries which they utter at night. This howling is much assisted by a large, peculiar bony chamber, connected with the larynx, and which gives a goitred appearance to their throat. Some of these Monkeys have their bodies covered with long hair, while others are distinguished by a very bushy beard. The Ouistiti Marmozets and little Silky Lion Monkey are noticeable for their delicate beauty; the Douroucoul, with its large eyes and Lori-like aspect, is strictly nocturnal.

Cases 19 and 20 contain the Lemurs and Loris. The Lemurs take the place of Monkeys in Madagascar, and are handsome soft-furred animals with convolute tails. They live in trees, and feed on insects and fruits. The Loris are East Indian animals, with large eyes; they sleep all day, and are very active at night. The Flying Lemurs, or Colugos, have the fore and hind legs connected by an expanded skin, which acts as a parachute, supporting them when leaping from branch to branch. They live on trees in the Indian Archipelago, and suspend themselves by their feet to the branches, back downwards, and thus form a kind of hammock in which they nurse their young.



Cases 21-51 contain the Carnivorous Quadrupeds, distinguished by the sharpness and trenchant form of some of their molars, the tubercles projecting from others, and the large size of the canine teeth. They are particularly organized to feed on flesh; most of them catch and kill their prey. The Cats, or Feline Animals, with their retractile claws; the Lion of Africa and Asia; the striped Tiger of India; the spotted Leopards of Africa and Asia, at home among trees; the fierce Jaguar of South America; the long-tailed Ounce with its thick fur, found even among the snows of the Himalaya. The sharp-eyed Lynx with its tufted ears; the Cheetah, or Hunting Leopard, trained in India to bring down game, and for that purpose carried hoodwinked, till an Antelope or other game is in sight, when, on the blinders being removed, the Cheetah pursues and springs on the animal.

Cases 30 and 31. The Hyænas, noted for their extreme voracity, and the loud howling they make at night; they feed chiefly on carrion.

Case 32. The Civets, which secrete in a pouch a peculiar substance used as perfume. The Genets, Lingsang, Basaris, and Ichneumons prey upon the smaller quadrupeds and birds, and are fond of sucking the eggs of reptiles and birds. The Surikate is readily tamed. Cases 37-42. The Dogs which walk with the claws exposed; the ferocious Wolves hunt their prey in packs; the Jackals wander about at night and feed on carrion: their howling is frightful. The Foxes, with sharp muzzles and bushy tails, are proverbial for their cunning: a species is found in the Arctic regions, which turns white in winter. The African Otocyon and Fennec, with their enormous ears. Of the Dogs, one of the most interesting is the Esquimaux Dog, so indispensable to the northern tribes during their long journeys over the snow. Case 43. The Weasels, well adapted by their slenderness to creep into holes where they find their prey. Some of the best furs are derived from this tribe; in Siberia and North America, the Sable and Ermine are regularly trapped during the winter for their skins. Case 44. The Wolverine, a very astute and ferocious animal, said to master even the large Elk, on which it drops; the Cape Ratel, whose favourite food is honey, in getting which it shows a peculiar instinct; the Badgers, very strong creatures living in holes which they dig in the ground; the Skunks derive their name (*Mephitis*) from the odious smell which they emit when provoked: they are natives of America.

Case 45. The Otters, with their webbed feet and long fish-like bodies, inhabit rivers and lakes, and live on fish; the skin of the American Sea Otter is greatly valued by the Chinese as a fur.

Cases 45-50. The Bears are named Plantigrade from walking on the soles of their feet, unlike the Dogs, which are Digitigrade, or walk on their toes. These animals are more frugivorous than carnivorous; but the Polar Bear, the tyrant of the Arctic seas, lives chiefly on fish diet. The tropical Bears have generally short fur and long tongues. Most of the Bears can climb well, and balance themselves on the hind legs with ease. The American Raccoon has been called Lotor, or the Washer, from its habit of dipping its food in water before



eating it. Case 51. The Coati, with its long snout, which is used for grubbing in the ground; the Ailurus of Nepal, one of the most brilliantly coloured of quadrupeds, a very active creature among trees. Here are placed the Insectivora, such as the Moles, with their strange fore-feet used for digging; the Golden Moles of South Africa, with their refulgent fur, so rare among the Mammalia; the Tanreos of Madagascar and the Mauritius, which sleep during the intense heats of summer; the Hedgehogs, with their prickles,—they are useful to destroy cockroaches; the Ptilocercus of Borneo, with its long feathered tail; the Tupaia of Java; the long-nosed Elephant-shrews of Africa; the little sharp-nosed Shrews which live on insects and worms; the Gymnura of Malacca, the largest of the group.

Cases 53–64. The various kinds of Marsupial Animals, so called from the pouch in which the young is so long nurtured; they are only found in Australia and America: among them may be noticed the Petauri or Flying Phalangers; the Cuscus, natives of New Guinea and the adjacent islands, with their prehensile tails; the dwarf Opossum Mouse and curious-footed Tarsipes of King George's Sound. The Koala, often called by the Australian colonists *the Monkey*; the Phalangers; the Kangaroos, with their long hind legs and large tails, so useful to them in their flying leaps; the Rock Kangaroo, and the Tree Kangaroo, with its bear-like aspect. The Bettongia, one of which makes a curious nest; the tail-less burrowing Wombat with its thick skull; the voracious Tasmanian Wolf, and the Dasyure or Australian Devil, which worries the sheep of the colonist; the pretty-banded Myrmecobius. The Opossums of the New World, some of which feign death, and the little Philander, the young of which climb on their mother's back and twine their tails round that of the parent, for safety.

Cases 65–81 contain the Glires, or Gnawing animals, the mass of which are small-sized; the largest is the Capybara of America. Amongst the more remarkable may be indicated, the trowel-tailed Beaver, still found in North America, but very rare in Europe; the Coypu and Ondatra, whose furs are used in manufactures. Cases 70–72. The Porcupines, so formidably armed with quills. Some of these live among trees and have long prehensile tails; the Agoutis and Pacas of the New World. Cases 73–75. The Hares, the fur and flesh of which are so useful to mankind; the Jerboas, some of which take flying leaps; the Peruvian Chinchilla, with its delicate fur; the Dormice. Cases 77–80. The Squirrels, with their long bushy tails, chiefly living among trees; the Flying Squirrels, which can vault from tree to tree, assisted by the expansion of the skin of the sides. The Marmots, which pass the winter in a lethargic state; the Mole Rats and Sand Moles burrow in the ground and feed on roots; the Pouched Rats of North America, which have large cheek pouches, wherein they store their food and carry it to their burrows.

On the tops of the Cases and suspended on the walls, are arranged the collections of Seals, of Porpoises and Dolphins, and of the Manatees of Jamaica and Western Africa: most of these mammalia live in the sea; a few in estuaries or rivers. Some of the Seals are much valued for

their skins and for the oil derived from their fat. Among the Dolphin family may be noticed the curious *Platanista*, or long-beaked Dolphin of the Ganges.

The GENERAL COLLECTION OF CORALS is exemplified by selections arranged in the Table Cases. Tables 1-20 contain the various kinds of Madrepores or Star Corals, as the Sea Mushroom; the Brainstone; the Clove Coral; the Millepore. On the floor is a large mass of one of the corals which forms reefs in the sea, so dangerous to ships. Tables 20-31. The Barbed Corals, which generally assume the form of trees, as the Tree Coral; the Red Coral of commerce; the *Gorgonia* or Sea Fans; the Sea-pens, some of which emit a bright phosphorescent light.

### EASTERN ZOOLOGICAL GALLERY.

The *Wall Cases* contain the general collection of BIRDS; the larger *Table Cases* contain the collection of SHELLS of Molluscos animals; on the top of the Wall Cases is a series of horns of different kinds of Deer and Rhinoceros.

The Wall Cases on the west side of the room, or to the left on entering from the Mammalia Saloon, contain (1-35) the diurnal Birds of Prey; (31-36) the nocturnal Birds of Prey. Cases 36-42 contain the wide-gaped (fissirostral) Perching Birds. Cases 43-47 contain the slender-billed or tenuirostral Birds; Cases 48-61, the tooth-billed (dentirostral) Passerine Birds; Cases 62-73, the strong-billed Conirostral Birds; Cases 74-83, the climbing or Scansorial Birds. These are all on the west side of the room.

On the east side of the room, Cases 84-106 contain the Gallinaeous Birds; Cases 107-134, the Wading Birds; and Cases 135-166 the Web-footed Birds.

Cases 1-35. Raptorial Birds. Some of the most interesting species are, the Condor, or Great Vulture of the Andes, which soars higher than any other bird; the Turkey Buzzards, or Carrion Vultures, which clear away putrifying carcases, and are the most useful scavengers in the warmer parts of America; the Eagles, the most formidable of which are the Harpy of South America and the Wedge-tailed Eagle of Australia; the Kites, so rapid on the wing; the true Falcons, which are the most courageous, in proportion to their size, of all the Birds of Prey, and some of which are used in Falconry; the Secretary Bird of South Africa, with its long legs, which kills venomous snakes, and derives its name from the plumes, like pens, on the side of the head: the above obtain their food during the day. Of the nocturnal Birds of Prey, may be noticed the great Hawk and Eagle Owls; the Snowy Owl of North Europe and America, often active during the day. The long feathers of the eared Owls must assist in collecting the slightest sound; the birds themselves glide noiselessly through the air.

Cases 36-83. The Perching Birds, divided into five great sections. Of the wide-gaped section, may be specified the Goatsuckers, which fly about at night, and live on moths and beetles; the Trinidad Goatsucker, or Fat-bird, is found in caves in South America; the fat of the

young is used in cookery. The Leona Goatsucker of West Africa, with very long feathers appended to its wings, so that it looks like three birds when it flies. Case 38 contains the Swallows and Swifts, which pursue flies on the wing; their wings and tail are very long, their legs very short. The Esculent Swallow constructs its nest of a substance which when dissolved in soups is esteemed a great luxury in China and elsewhere in the East. Case 39. The Todies, Rollers, Broadbills, and Motmots, living chiefly on insects and fruits; the plumage of many of these is very showy. Case 40. The Trogons, living in low damp woods in the tropics, particularly of the New World; one of the most conspicuous is the long-feathered Quezal, a sacred bird among the ancient Peruvians. Cases 41, 42. The Kingfishers, large-billed birds with short tails, living on fish; they are generally of bright plumage. One of the largest and most sombre-coloured is the Laughing Kingfisher of Australia, which lives on snakes and reptiles; the colonists call it the Jackass, from its loud and singular note. Among the Teuurostral Birds may be noticed the Hoopoes and Sunbirds of Africa and Asia; the latter have brilliant metallic plumage, and have often been taken for Humming-birds; they feed on the nectar of flowers and on insects which they find in the tubes of flowers. Case 44 contains the Humming-birds, which have been named "flying gems;" they are peculiar to America. The males are of the most resplendent colours. Among the finest may be mentioned the topaz, garnet-throated, and tufted-necked Humming-birds. The beak in some of the species is of enormous length, in most it is straight or bent down, in a few it is turned up. The racquet-tailed Humming-bird is a singular species. Their food is minute insects and the honey of flowers. They fly with a humming noise, and never settle on the ground.

Case 45. The Honey-eaters, peculiar to Australia and New Zealand. They have curiously-feathered tongues, which assist them in sipping their food. Cases 46, 47. The Creepers, Nuthatches, and Wrens, most of which can creep up trees, their long hind claws taking a firm grasp of any inequality in the bark. The Nuthatches have great strength in the beak, in this respect resembling Woodpeckers, and, like them, tapping on trees. Cases 48-61. The tooth-billed Passerine Birds feed chiefly on insects and grubs. Case 48. The Tailor-birds, forming curious nests of leaves and grass, which they stitch together; the superb warblers and Emu Wren of Australia, and the Lyre-bird or Menura of Australia, the largest of song birds. Case 49. The Warblers, birds of plain plumage, but famed for their agreeable song; the Black-cap and Nightingale are placed here. Case 50. The Wheatears and Titmice; the latter are very active in flitting from branch to branch and suspending themselves in all kinds of attitudes whilst seeking for insects on trees. Case 51. The American Wood Warblers. Cases 53-55. The Thrushes: some of these have long legs and short tails, such as the tropical Ant-Thrushes; many have brilliant plumage; others of more sombre plumage inhabit Europe and the temperate parts of the world, and are famed for their powers of song. Cases 56, 57. The Flycatchers, so named from their feeding on insects which



they capture when flying. The Tyrants of North and South America pursue and catch small birds as well as insects. One of the most curious is the King Tody of South America, with a finely coloured and peculiar radiated crest on its head. Cases 58, 59. The Chatterers : many of these are of beautiful plumage and feed on berries and insects ; remarkable among them is the white Chatterer, called the Campanero, or Bell-bird, from its note at mid-day in the American forests resembling the convent bell. Case 59-61. Shrikes and Butcher birds : many of these impale insects and small birds on thorns, and hence their name ; some of the Drongos, or Indian forked-tailed Shrikes, have great powers of song.

Cases 62-73. The Conirostral Passerine Birds feed chiefly on grain and fruit, but may be called omnivorous. The Crows and Jays ; the curious bare-necked Grakles of South America ; the gorgeous Birds of Paradise from New Guinea and the adjoining islands, to which they prove a considerable source of revenue. Selections of the finest specimens of the Birds of Paradise have separate glazed cases allotted to them. Case 65. The metallic-plumed shining Thrushes ; the satin Bower Bird of Australia forms a bower of twigs, which it adorns with feathers and strews with bones and stones, and uses it as a place to play in. The Oxeckers of Africa with their strong beaks pick grubs out of the skin of oxen and other beasts.

Case 67. The yellow and black Orioles, some of which, like the Cuckoos and Cowpen Bunting of North America, lay their eggs in the nests of other birds. Case 68. The Weavers of Africa and Asia, so named from the elegant nests they weave with dried grasses : some of these live in great colonies with the nests under one great cover ; the Grosbeaks, particularly the thick-billed Ground-sparrow of the Galapagos ; the Tanagers of the New World, remarkable for the gay plumage of the males ; the Finches and Buntings, living chiefly on seeds ; the Larks, which sing when fluttering in the air ; the Crossbills, with the points of the beak crossing each other and giving them great power in tearing pine-cones to pieces to get at the seeds ; the Colies of Africa and India, which sleep in companies, suspended by one foot ; the African Plantain-eaters. Cases 72, 73. The Hornbills, with their enormous beaks : the females when incubating are imprisoned in the nest and fed by the male. Cases 74-83. The Scansorial Birds, powerful graspers from the arrangement of the toes, two before and two behind ; they chiefly live on fruit ; the long-tailed Brazilian Maccaws with their naked cheeks ; the Australian Parakeets ; the Cockatoos ; the New Zealand Strigops with its owl-like aspect ; and the red and blue Lories of the Indian Archipelago.

Case 77. The Toucans of the New World, with large beaks ; one of the most curious is the curl-crested species. Cases 78-80. The Woodpeckers, with their wedge-shaped beaks and bristly-pointed tails ; they live on insects and larvæ, which they extract from trees, by pecking with their strong chisel-like beaks, and then insinuating their long extensile tongues. The species are most numerous in America and Asia. Cases 81-83. The Cuckoos. Many of these deposit their

eggs in the nests of other birds, which sit upon them and rear the young; the Honey-guides of South Africa are so called from guiding the natives to the nests of wild bees; the Golden Cuckoos of South Africa have brilliant metallic green and purple plumage; the Anis are black birds, found in South America and the West Indies. They are very fond of warmth, and live on insects.

On the East side of the room, in Cases 84-106, are placed the Gallinaceous Birds, beginning with the Pigeons; the most conspicuous of these are—the Victoria and great Crowned Pigeons of the East Indian Islands; the Nutmeg Pigeons, feeding on aromatic fruits; the Bronze-winged Pigeons of Australia; and a Pigeon which has a red spot on the breast, as if it had been shot there with an arrow, and the blood had oozed out. Unlike the other Gallinacæ, the Pigeons when hatched are bare, and require to be fed by their parents.

Cases 89, 90. The Curassows of South America, some of them with curious crests and knobs on their beak.

Cases 91-93. The Peacocks and Argus Pheasants of Asia and its islands; the rare Crossoptilon from Thibet, and the many-spurred Polyplectrons, with their fine eye-like spots. Cases 94, 95. The Pheasants: the most conspicuous are Lady Amherst's Pheasant from Thibet, the long-tailed Reeves's Pheasant from China. Cases 96-99. The Wild Fowls, which are inhabitants of the Asiatic jungles and woods; the Fire-backed Pheasant, and the Horned Pheasants of North India, with their fine painted faces. Cases 99, 100. Turkeys and Guinea-fowl; the most conspicuous is the Ocellated Turkey of Honduras. Case 100. The Monaul, or Impeyan Pheasants, found on the high mountains of India, where they live on bulbous roots which they dig up with their large beaks. Cases 101-103. The Partridges and Quails; among the most curious are the Californian and Crested Quails; some of these are found in large flocks; they subsist on seeds chiefly. Cases 104, 105. The Grouse are amongst the most favourite birds of game: some inhabiting snowy regions, change their plumage in autumn to snow-white. Case 105. The Sandgrouse, with their ochrey plumage, inhabit the deserts of the Old World. Case 106. Sheathbills and Tinamous of the New World. The Megapodius group, including the Brush Turkey of Australia, make large mounds of decaying vegetable substances, in which the eggs are deposited, and are hatched by the heat of the fermenting mass.

Cases 107-134. The Wading Birds, generally provided with long legs. Cases 107-109. The Ostrich, Emeus, and Cassowaries, the largest of recent birds, incapable of flight, but noted for their powers in running. In Case 108 are specimens of the Apteryx, wingless birds of New Zealand, sleeping during the day, and feeding at night on worms and insects. The remains of the bird called the Dodo, which has been long extinct: the foot in the Case belonged to a specimen in Tradescant's Museum at Lambeth; the painting is said to have been made from a living bird, brought from the Island of Mauritius, to which the species was peculiar. The selection of bones in the second case, including the breast-bone or sternum, the pelvis,

the skull and leg-bones, was obtained from a turbary in the Mauritius, and exemplifies the affinity of the Dodo to the doves. Cast of the egg of the *Æpyornis maximus*, a gigantic bird, at one time a native of Madagascar. Cases 110, 111, 112. The Bustards and Coursers, quick running birds, inhabitants of the barren parts of Europe, Africa, Asia, and Australia, where they feed on grain, herbage, worms, and insects. Cases 113, 114. The Plovers, Turnstones, and Oystercatchers; the last are so named from their opening bivalve shells, with their bills, to feed on the contents. Case 114. The Trumpeters of South America; one of these is employed to guard poultry from the attacks of hawks. Cases 115–117. The Cranes, found on the borders of rivers and marshes, feeding on fish and frogs; some of them famed for the regularity of their migrations; the fine-crested Egrets, with their delicate white plumes; the Bitterns and Night-Herons; the wide-beaked Boatbill and Spoonbills; the Demoiselles, so named from their graceful and elegant motions. Cases 124, 125. The Storks and Ibises; the Ethiopian Ibis, the mummies of which were preserved by the ancient Egyptians. Cases 127–129. The Godwits, Sandpipers, and Phalaropes; the Avocets, with their very long legs, and upturned or recurved bills; the long-legged Plover, which seems to walk on stilts. Case 130. The Snipes, which feed among marshes; the Painted Snipes of India. Case 131. The Jacanas, with their long toes, enabling them to walk with ease over the floating leaves of water plants; the Screamers of South America, with spines on their shoulders, used in killing snakes. Case 132. The Rails. Cases 133, 134. The Gallinules, which live on the borders of rivers and lakes; one of the most notable, as it is the rarest, is the *Notornis Mantelli* of New Zealand, now nearly extinct. Case 134. The Finfoots of South America and West Africa have curiously lobed feet, and dive like the Grebes.

Cases 135–166. The Web-footed Birds. Case 135. The Flamingos, the longest-legged birds of the group. Ancient epicures regarded their tongues as a most luxurious dish. Cases 136–139. The Geese, such as the Spur-winged Geese, so named from the spurs with which the wings are armed; the Geese feed chiefly on grass and other herbage. Cases 140–142. The Swans, with their long and graceful neck; the Black Swans of Australia, giving the names to one of the districts; the Black-necked Swan of Chili. Cases 143–146. The Ducks: some of these, as the Sea Ducks, have a fin to the hind toe; the spinous-tailed Ducks are found in the warmer parts of the world; the pink-headed is a rare and curious species. Case 150. The Mergansers, natives of the arctic regions, where they feed on fish. Cases 151, 152. The Divers, so named from their powers of diving, greatly owing to the backward position of their legs; the Grebes have often curious tufts of feathers about their heads. Cases 153, 154. The Auks, oceanic birds, found within the Arctic and Antarctic Circles, where they dive after fish and crustacea, on which they feed; they use their scaled wings as oars: the Great Auk (*Alca impennis*) is believed to be now extinct. The skeleton



of this bird on the adjoining Table Case was obtained from a guano-mound in a small island near Newfoundland. Case 154. The Sea Parrots and Guillemots, building on the ledges of precipices overhanging the sea. Cases 155-159. The Gulls and Petrels, marine birds, feeding on fish and other marine creatures; the Albatross has the greatest extent of wing of any bird, and has the most wonderful powers of sustained flight. The Stormy Petrels seem to run on the water, and often feed in the wake of ships. Case 160. The Terns or Sea Swallows, birds of great powers of wing; the Skimmers have curious razor-like bills, the upper mandible being the shortest. Case 161. The Tropic Birds, so called from their homes being in tropical climates. The Darters or Snake Birds have small heads and long necks; they dart into rivers, and spear fish with their sharp bills. Cases 162-166. The Pelicans, Cormorants, and Frigate Birds, some of which have large pouches under their beaks, in which they hold the fish which they catch.

The SHELLS of MOLLUSCOUS ANIMALS are placed in the larger Table Cases across the sides of the room.\*

Tables 1-20. The Gasteropods, like the Whelk and Snail, which creep by means of a fleshy surface projecting from the under part of the body and called the foot, with comb-like gills. Some of the more marked are the cones, such as the rare "Glory of the Sea" from the Philippine Islands; the animals of these kill their food by means of poisonous teeth implanted in their beak. Tables 3-13. The Trunk-bearing Mollusca, with the hard teeth in their long proboscis, make perforations in other shells and extract their contents; the Olives, Harps, Persian Carpets, Turnip shells, Mitres, Volutes, and Date shells; the Helmet shells, used in making artificial Cameos; the Wentletrap or Staircase shells, once so celebrated among collectors for their rarity. The Violet shells, which float on the ocean and emit a purple fluid like the Murices, which has been used as a dye. Tables 14-20. The Rostrum-bearing Mollusca, with a long muzzle with tentacles on the sides; as the Apple Snails, which live in ponds in warm climates; the Cowries—one kind is extensively used in place of small coin in Africa and Asia. These all crawl on a broad expanded foot. In Tables 19, 20 are the Strombs and Carrier-shells, which have a compressed foot for leaping. The Carrier-shell has the peculiarity of attaching to the outer surface, as it enlarges in size, stones, fragments of other shells, coral and other marine substances, and has been called "the Conchologist" and "the Mineralogist," according as shells or minerals preponderated.

Tables 21-24. The Scutibranchous Mollusca, the gills of which consist of lamellæ, forming one or two series on the back of the neck or on the under edge of the mantle round the foot; such as the Trochidæ, the Haliotidæ or Earshells with their pearly lustre; the Fissurellæ or Keyhole limpets; the Limpets with their simple conical shells and the

\* Models of the animals of most of the families are arranged in the Cases along with the shells.

many-valved Chitons, which have a series of eight shelly pieces or "valves" down the back of the animal.

Tables 25-30. The Heterobranchous Gasteropods, with variously-formed respiratory organs. The Bulladæ are placed here, and their curious strong gizzards; the Bubble shells, the Aplysia or Sea Hare, which feeds on sea-weeds and discharges a deep purple fluid when danger approaches; the Helicidæ, or Snails and other allied families, which live on land and have cylindrical retractile tentacles.

Tables 31-48. The Bivalve shells or Conchifera; the animal of these is enclosed between two shelly valves, united by a ligament. Tables 31-38 contain the Siphonophora, which have the mantle closed behind, and furnished with two apertures, the lower for the admission, and the upper for the emission, of the water from the mantle cavity. Some of these, as the Veneridæ and other families, crawl on a compressed foot, while the Cockles have an elongated foot, angularly bent in the middle, and fitted for leaping. Near these, but with a small rudimentary byssiferous foot, are the Tridacnæ, one of which (the *T. gigas*), when full grown, is the largest and heaviest of shells, some of them weighing more than 300 pounds. The Pholadacea, or Boring shells, live sunk perpendicularly in holes in rocks, or in sand. Tables 39-48 contain the Asiphonophora, which have the mantle-leaves free, and sometimes a separate single siphonal opening, for the emission of the water, as the Mussels and Oysters, many of which secrete pearls; the brightly-coloured Spondyli, or "Thorny Oysters," with their rough, foliated or spiny shells, and the thin Placunæ, or "Cake-Oysters," which are semi-transparent. In Table 49 are shells of the Mollusca which have no distinct foot on the under side of the body, and which either live attached to marine bodies (*Brachiopoda*), or float on the surface of the sea (*Pteropoda*), or walk on their heads (*Cephalopoda*). The Pteropoda have an expanded fin on each side of the small foot, and float on the surface of the sea, especially in the evening. Of these the Limacina and Clio, abundant in the Arctic Seas, form a great part of the food of the whale. Table 50 contains the shells of Cephalopods; the animals (of which the Cuttle-fish is an example) have eight, ten, or many strong and elongated arms round the mouth of their large and distinct head, on which they crawl: the mouth is armed with large beak-like jaws. Their eyes are large, and their back is generally supported with a horny blade, sometimes strengthened with a shelly coat, as the cuttle bone. They have a secretion of a deep black colour, which they emit when in danger, and thus conceal themselves. They are very voracious creatures. The female of the Paper Nautilus (*Argonauta*) fabricates a delicate symmetrical shell, in which she lays her eggs, and there protects them. Both sexes of the Pearly Nautilus form a shell for their protection, one portion of which is divided into chambers. Some of the extinct chambered shells, as the Ammonite, are placed with the Nautilus Shell in Table 50.

In some of the side Table Cases there are—a series of specimens ex-

hibiting the structures, diseases, deformities, and reparations of shells, such as the distorted variety of the common Garden Snail, described as *Helix Cornucopiæ*; a series of the eggs and egg-cases of Molluscs; a series of specimens exhibiting the shells used for commercial purposes, such as the cameos, mother-of-pearl, gloves made from the byssus of the Pinna, the Chank shells carved by the natives of India and used in their temples. In another Case are specimens of the various kinds of Sea Slugs, "Bechedi Mar," or Trepan (*Holothuria*), from the Canton market, where they are sold as articles of food.

## THE NORTHERN ZOOLOGICAL GALLERY.

### FIRST ROOM.

The WALL CASES contain a collection of the Nests of Birds and Insects, exhibiting the architecture of these animals. Among the more noticeable are the playing avenues of the Australian Bower Birds, the pendulous nests of some of the Orioles, and the gelatinous nests of the Esculent Swallow. The Table Cases contain specimens illustrative of the various changes of Insects, their nests and structures; the cocoon of the gigantic Goliath Beetle of Western Africa, the clay nests of various species of White Ants, and the various Vegetable Galls, are shown here. The Cases contain a collection of the nests of the different Hymenoptera: some of the nests prepared by the wasps are formed of clay, while others are of a kind of paper from vegetable substances. Specimens of the various insect fabricators of these structures are attached, when possible, to the nests. On the walls are suspended some of the larger specimens of Reptiles.

Some of the rarest examples of small quadrupeds are exhibited on the Table Cases. The stuffed specimen of the Aye-aye of Madagascar shows its large ears, the slender middle finger of the fore-hand, and the thick thumb of the hind-hand. The skeleton of the same animal shows the strong curved chisel-shaped front teeth: with these the Aye-aye gnaws down to the burrows of wood-eating grubs, and with its slender hooked finger extracts them. It is nocturnal, arboreal, and is guided to its favourite food by its acute sense of hearing.

### SECOND ROOM.

The WALL CASES contain the stuffed exotic REPTILES and BATRACHIA; in the Table Cases are contained the hard parts of the RADIATED ANIMALS, including the SEA-EGGS, SEA-STARS, and ENCRINITES.

The Wall Cases 1-10 contain the LIZARDS; as the Monitors of Africa and India, venerated by the natives, who believe that they give notice of the approach of Crocodiles and Alligators, and hence their name; the Heloderms of Mexico, which have grooves in the back of the teeth like the poison-fangs of serpents; the Safeguards, large lizards of the tropical parts of America. The Scines, generally small, and polished: some have distinct and strong legs, and others



only traces of them ; in the Blind Worms the bones of the legs are hid under the skin. Cases 8, 9. The Geckos, or Night Lizards, which can walk up glass, and run with facility, back downwards, on the ceiling of a room, like flies. The Guanas, many of which are highly esteemed as food, are natives of America, and, like the Chameleons, have the power of changing their colour with great quickness. In Case 10 is the Moloch of King George's Sound, covered with large spines, which serve for its defence ; the diminutive Dragons of India, with the skin of their sides expanded upon long slender ribs, in the form of wings, which spread out and support the creatures as they leap from branch to branch. The Chlamydosaurus, or frilled Lizard of North Australia, with a large folded frill round its neck, like a Queen Elizabeth's ruff, which it can elevate when excited. The Chameleons of Africa and India, celebrated for the rapidity with which they change their colours ; they feed on insects, which they catch by protruding their long tongues ; only a small part of the eye is visible, the rest being covered with skin ; the eyes move independently of each other.

Cases 11-17. SNAKES or SERPENTS. Case 11. The Poisonous Serpents, such as the Rattle-snakes of the New World, which have a rattle at the end of the tail ; this rattle is formed of a series of hard horny joints, fitting loosely one into another, which the animal can shake at pleasure ; the Vipers, such as the Adder, the only venomous reptile of the British Islands ; the Puff-adders of Africa, so named from their power of inflating their bodies when irritated. Cases 11-17. The Colubrine Snakes, such as the Sea-snakes found in the seas of Asia and Australia ; many of them have poison-fangs. The Boas, with the rudiments of legs more conspicuous than in other snakes ; they are not venomous ; they kill their prey by constriction, twisting the end of their prehensile tail round a tree, and thus increasing their power over the animal when encircled by the folds of their body ; their gape is enormous. The Coral Snakes are banded with black and red rings ; the Cobra Snakes, which can dilate the skin of the neck so as to form a kind of hood over the head ; they are the snakes used by the Indian jugglers. They have large poison-fangs, which are carefully extracted before the performances. The Tree Snakes, called, from the great length of their bodies, the Coach-whip Snakes ; one kind has the nose much produced.

Cases 18-23. The TORTOISES and TURTLES. Cases 18, 19. The Land Tortoises live on vegetable substances ; the gigantic, so called, Indian Tortoise, is common in the Galapagos islands, whence sailors procure them as food. Cases 20-22. The Fresh-water Tortoises live on animal food ; some of these cannot withdraw their heads into the cavity of the shell like the other Tortoises. Case 23. The Three-clawed Terrapins live in the rivers of Africa, Asia, and America ; they are carnivorous, and eat their food in the water. The Marine Turtles live in the ocean, feeding chiefly on sea-weeds and shell-fish ; these include the Green Turtle, the fat of which is so much relished by the gourmand ; the imbricated Turtle, which furnishes the best sort of "tortoise-shell."

Cases 24-26. The CROCODILES and AMPHISBÆNAS. The Crocodiles and Alligators drown their prey, and then devour it; the Alligators are only found in America; the Garial, or long-beaked Crocodile, is peculiar to India, and feeds chiefly on fishes, for taking which its long and slender snout and sharp teeth are well adapted. The Amphisbænas are so called from both ends being nearly equally blunt, which has led to the idea that they could move backwards or forwards with equal ease.

Case 26. The BATRACHIA, such as the Toads, Frogs, and Efts; the Tree-frogs can walk on polished surfaces, and under the smoothest leaves; the Bull-frogs of America, so called from their loud bellowing noise; the horned Toads of Brazil; the Pipa of Brazil, which deposits its eggs in cells on the back of the male, where they are hatched, passing through the form of the tadpole, and escaping as a frog after a certain period; the Siren of Carolina, which looks like an eel, with front legs—it is a truly amphibious animal, with lungs and gills; as is the Proteus of the dark, subterraneous caves of Carniola, which is here further exemplified by a wax model, to show its appearance when alive; the coral-coloured appendages to the head are the gills; it has also lungs. The Mudfish (*Lepidosiren*) from the Gambia, shaped like an eel, covered with large scales, and having four elongated fringed filaments on which it supports itself. In summer, when the water in the rivers is dried up, it sinks two or three feet in the mud, and becomes torpid. It is often dug up and eaten. This specimen was formerly exhibited alive in the Crystal Palace.

The Table Cases (1 to 10) contain the Echini, or Sea-eggs, such as the Club-spined Echinus and the Tessellated Echinus; the spines readily fall off when the animal is dead. Tables 7, 8. Sea Pancakes, so depressed that there scarcely appears to be any room for their internal organs. Many Echini are found in a fossil state, particularly in the chalk. Tables 11-18. The Star-fish, some with five and others with many rays; the rays are easily reproduced when broken or injured. Tables 19-23. The Lizard-tailed Star-fish throw off the ends of their rays when they are handled or put into fresh water. Table 23. The Gorgon's Head, with its many branches, somewhat resembling the Medusa's Head of Mythology. Table 24. The Comatula, or Sea Wigs, the living representatives of the Eocrinites found so abundantly in some rocks. There is a recent Encrinite from the West Indies in a small case at the side of the doorway.

THE THIRD ROOM CONTAINS THE

## BRITISH ZOOLOGICAL COLLECTION.

The WALL CASES hold the Vertebrated Animals; the larger species, such as the Whales, Sharks, Tunny, &c., are suspended on the Walls, or placed on the tops of the Cases.

The TABLE CASES contain the Eggs of the Birds; a series of British Annulose Animals, to illustrate the arrangement of the British

Insects, Spiders and Crabs; the Collections of the Shells and external skeletons of British Molluscs and Radiated Animals.

In the Wall Cases 1-9 are the British MAMMALIA. Cases 10-30 contain the Birds. Among these are specimens of two species, which have now become extinct in these islands: the Capercailzie or Wood Grouse, and the Great Auk; in the bottom of the Case is a Collection of the Nests of the smaller British Birds. Case 31. The British Reptiles. Cases 31-43. The British Fishes. In Table Case 1 are the Eggs of British Birds; Table Cases 2, 3, the British Annulose Animals, such as Insects, Spiders, and Crustacea; Cases 5 and 6, Shells of British Mollusca; and Case 8, the hard parts of British Radiated Animals.

#### FOURTH ROOM.

The WALL CASES round the Room contain the stuffed collection of exotic bony Fish, at present under arrangement. The TABLE CASES contain select specimens of Annulose Animals, to exhibit their systematic arrangement.\*

Wall Cases 1-13. Spiny-rayed Fish, such as the Perches; the Flying Gurnards, with their large pectoral fins; the Chætodons, some of which have a tubular mouth, like a gun-barrel, and can shoot a drop of water at their prey; the Mackarel and Tunny Tribes, affording an important article of food; the Pilot fish, which follows in the wake of ships along with the Shark; the Sword fish, with its long pike-like nose; the Dolphins, which change colour so rapidly when they are dying; the Surgeon fish, armed with a lancet-like spine on the side of its tail; the Wolf fish, able to crush the hardest shells; the Gobies, which make a nest of sea-weeds, &c. The Anglers or Fishing Frogs, with their enormous head and mouth; the Rock fish, so many of which are gaily coloured when alive. They have thick fleshy lips.

Wall Cases 14-19. Soft-rayed Fish, such as the Carp, and other fresh-water fish; the voracious Pikes; the bony Pikes of the American rivers, armed with coats of mail like plates of ivory; the Siluroid fish, many of which are armed with rows of plates. The Thunder fish of the Arabs is one of these, which can communicate a galvanic shock; the Salmon and Trouts peculiar to the Arctic and North temperate regions. The Herrings, the Cod and Haddock family—so useful to man as food, and all of them swimming in great shoals; the flat-fish, such as Turbots and Flounders, with compressed bodies: they lay on the white side at the bottom of the sea. The Lump-fish and the Eels are in Case 22.

Cases 23, 24. The Sea-horse, or Hippocampus; the Globe fish, covered with spines: they can puff themselves up with air.

\* The General Collections of Insects and Crustacea are preserved in Cabinets. They may be seen by persons wishing to consult them for the purpose of study (by application to the Keeper of the Zoological Collection) every Tuesday and Thursday. To prevent disappointment, it is requested that persons wishing to see those Collections will apply two days previous to their intended visit.



Cases 25, 26. The File-fish, with small teeth and a hard skin; the Coffin-fish, with a hard horny skin, formed of six or eight-sided plates.

On the tops of the Cases are some specimens of the larger Fish; the Sudis gigas of Guiana, the largest fresh-water fish; the Flying Sword-fish; the pike of a Sword-fish forced through the oak timber of a ship, these fish swimming with great force.

Tables 1-12. Insects, such as the Coleoptera, or Beetles; the Leaf beetle, or Mormolyce of Java; the Scarabæus, esteemed sacred by the Egyptians; the large African Goliath Beetles; the Fire-fly of the West Indies; the Weevils, as the Diamond Beetle of Brazil; the long-horned Beetles, such as the Harlequin Beetle; the Tortoise Beetles; the Lady-birds, so destructive to the plant-lice. Orthopterous Insects, such as the Praying Mantis, with their eggs; the Walking Sticks and Leaf insects, resembling leaves and twigs of trees; the Crickets. Neuropterous Insects, as Dragon-flies; Ant-lions, the larvæ of which form pits to catch insects; the White Ants, so destructive in the tropics. Hymenopterous Insects, as the Ichneumons, Ants, Wasps, and Bees, the most interesting of all the orders on account of the curious habits and strange instincts and powers of its members. The Lepidopterous Insects, such as the Butterflies, Hawkmoths, and Moths; the Hemiptera and Homoptera, with their strange forms; the Diptera, such as the Gnat and the Breeze. The Tsètse of South Africa, a fly which destroys horses and domestic cattle.

Tables 11, 12. The Spiders, as the Mygale, or Bird-catching Spider; the Mining Spiders, which dig holes in clayey banks, and close them by a door hanging with a hinge; the Scorpions; the Ticks, one of which is parasitic on the Rhinoceros. The Centipedes and Millipedes, so called from the great number of their feet.

Tables 13-24. Crustacea, such as the Land Crabs of the West Indies; the Hermit Crabs, which live in shells; the Robber Crab or Tree Lobster, which climbs the cocoa-nut trees to get at the nuts; the Lobsters and Cray-fish; the Glass Crabs found in the tropical parts of the ocean; the King Crabs of America and the Chinese seas.

#### FIFTH ROOM.

The WALL CASES contain the exotic Cartilaginous Fish, such as the voracious Sharks; the Rays; the Torpedo or Numb-fish, which defend themselves by means of a galvanic-like apparatus on each side of the head; the Sturgeons of the Russian and American rivers; the long and flat-snouted Polyodon of the Mississippi. On the tops of the Cases are the saws of various Saw-fish, and specimens of the larger Cartilaginous fish, and some of the larger Sponges, such as Neptune's Cup. In the Table Cases are exhibited various kinds of Sponges which belong to an extensive class of living beings, mostly microscopic, in which the distinctive character of the Animal or of the Vegetable is not fully developed.

JOHN EDWARD GRAY.

## LIST OF PORTRAITS

SUSPENDED ON THE WALLS OF THE

## EASTERN ZOOLOGICAL GALLERY.

*First Compartment. Beginning on the left from the Mammalia Saloon.*

1. KING JAMES I. On panel. *Presented by Dr. A. Gifford.*
2. KING HENRY VIII. On panel. *Presented by Dr. A. Gifford, in 1758.*
3. OLIVER CROMWELL. "A copy from Mr. Cromwell's original, grandson to Hen. Cromwell, L<sup>d</sup>. L<sup>t</sup> of Ireland. 1725." *This Portrait came with the Cottonian Library.*
4. ELIZABETH PRINCESS PALATINE, granddaughter of James I., by Michael Mierevelt. } *Presented by*
5. KING EDWARD III. On panel. } *Dr. A. Gifford.*
6. KING GEORGE I. *From the Old Cottonian Library.*
7. ELIZABETH QUEEN OF BOHEMIA, daughter of James I., by Michael Mierevelt. } *Presented by*
8. KING HENRY VI. On panel. } *Dr. A. Gifford.*
9. OLIVER CROMWELL, by Walker. *Bequeathed, 1784, by Sir Robert Rich, Bart., to whose great-grandfather, Nathaniel Rich, Esq., then serving as a Colonel of Horse in the Parliament Army, it was presented by Cromwell himself.*
10. KING JAMES I. *Presented by Mr. Cook.*
11. MARY QUEEN OF SCOTS, "æt. 42." On panel. *Presented by Lieut.-Gen. Thornton.*
12. KING WILLIAM III. *Presented by Dr. A. Gifford.*
13. WILLIAM DUKE OF CUMBERLAND, by Morier. *Presented by Lieut.-Gen. Thornton.*
14. JAMES DUKE OF MONMOUTH. *Presented by Dr. A. Gifford.*
15. KING RICHARD II. *Presented, in 1766, by John Goodman, Esq., of the Middle Temple.*
16. QUEEN ELIZABETH, by Zuccherro. *Presented by the Earl of Macclesfield, 1760.*
17. MARY QUEEN OF SCOTS.
18. KING GEORGE II., wh. l., by Shackleton. *Painted for the Trustees.*
19. QUEEN ELIZABETH. "Anno Dñi 1567." On pannel. *Presented by Lord Cardross, 1765.*
20. MARGARET COUNTESS OF RICHMOND. *Presented by Dr. A. Gifford.*
21. KING CHARLES II., by Sir P. Lely. *Presented by Dr. A. Gifford.*
22. KING HENRY V. On pannel. *Presented by Dr. A. Gifford.*

23. KING EDWARD VI. *Presented, in 1768, by Mrs. Mary Macmorran.*
24. CAROLINE, QUEEN OF GEORGE II., by Jarvis. *Presented by Lieut.-Gen. Thornton.*

*Second Compartment.*

25. DR. ANDREW GIFFORD, by Russel, 1774. *Bequeathed by himself, 1784.*
26. REV. DR. THOS. BIRCH, painted in 1735. *Bequeathed by himself.*
27. JAMES, 1ST DUKE OF CHANDOS, wh. l. *Presented by James Farquharson, Esq.*
28. HUMPHREY WANLEY, Librarian to the Earl of Oxford. *Presented by Herbert Westfaling, Esq.*
29. CLAUDIUS JAMES RICH, Esq., born 1787, died at Shiraz, 1821. Resident of the English East India Company at Bagdad from 1808 to 1821, whose collection of MSS., Medals and Antiquities, is placed in the British Museum. *Presented by his Widow.*
30. JOSEPH PLANTA, Esq., F.R.S., Principal Librarian of the British Museum, from 1799 to 1827, by T. Phillips, R.A. *Presented by the Right Hon. Joseph Planta, G.C.H.*
31. SIR HANS SLOANE, as "President of the Royal Society." Half length. "Step". Slaughter pinx. 1736."
32. SIR HANS SLOANE, wh. l., seated.
33. DR. JOHN WARD, of Gresham College. *Presented by T. Hollis, Esq.*
34. DR. MATTHEW MATY, 2nd Principal Librarian of the British Museum, by Dupan. *Bequeathed by himself, 1776.*
35. ABRAHAM REES, D.D., F.R.S., by J. Loonsdale. *Presented by Joseph Parkes, Esq.*
36. MAJOR-GENERAL HARDWICKE, by W. Hawkins. *Presented by Dr. J. E. Gray.*
37. SIR HANS SLOANE, by Murray.
38. DR. FRANCIS TURNER, BISHOP OF ELY.
39. ROBERT EARL OF OXFORD, by Sir G. Kneller. *Presented, in 1768, by the Duchess Dowager of Portland*
40. SIR ROBERT COTTON. *Presented, in 1792, by Paul Methuen, Esq., of Corsham.*
41. SIR JOHN COTTON. *From the Old Cottonian Library.*
42. RT. HON. ARTHUR ONSLOW, Speaker of the House of Commons, wh. l. *Presented by Admiral Onslow.*
43. SIR THOMAS COTTON. *Presented by his descendant, Mrs. H. M. Bowdler, 1826.*
44. SIR ROBERT COTTON, A.D. 1629. *From the Cottonian Library.*
45. EDWARD EARL OF OXFORD, by Dahl. *Presented, in 1768, by his daughter, the Duchess Dowager of Portland.*
46. HUMPHREY WANLEY. *Presented by the Earl of Leicester, in 1795, afterwards Marquess of Townshend and Earl of Leicester. "Humfredus Wanley Coventriensis, 1717."*
47. REV. DR. THOMAS BIRCH.



*Third, or Central Compartment.*

48. PETER I., EMPEROR OF RUSSIA, "from an original, drawn by Klingstad, in the possession of the Earl of Hertford, 1725; then Ambassador at Petersburg." *From the Old Cottonian Library.*
49. PEDIGREE OF THE CORNARO FAMILY.
50. STANISLAUS AUGUSTUS I., KING OF POLAND. } *Presented by the*  
 51. CHARLES XII. OF SWEDEN. } *Rev. A. Planta.*
52. A HUNTING PIECE, by John Baptist Weenix.
53. LOUIS XIV. *Presented by the Rev. A. Planta.*

*Fourth Compartment.*

54. LORD CHANCELLOR BACON. *Presented by Dr. A. Gifford.*
55. AN UNKNOWN HEAD, in ruff and beard; on panel; "Ætatis suæ 59, 1608."
56. JOHN DUKE OF MARLBOROUGH.
57. WILLIAM COURTEN, Esq., when young, inscribed "Gul. Courten Arm."
58. ANDREW MARVEL. *Presented by Robert Nettleton, Esq., Governor of the Russia Company.*
59. ADMIRAL LORD ANSON. A copy from the Picture at Wimpole. *Presented, in 1814, by the Earl of Hardwicke.*
60. ARCHBISHOP USHER. *Presented by Dr. A. Gifford.*
61. DR. THOMAS BURNET. "Ad vivum pinxit Romæ Ferdinand, 1675." *Bequeathed by Matthew Waters, Esq., 1788.*
62. HENRY STEBBING, D.D. "Jos. Highmore, pinx. 1757." *Presented by his grandson Henry Stebbing, Esq., 1813.*
63. SIR HENRY SPELMAN. *Presented by Dr. A. Gifford.*
64. AN UNKNOWN HEAD, a scull in the right hand; on panel. "Ætatis suæ 24. A. 1569."
65. SIR WILLIAM DUGDALE.
66. WILLIAM CECIL, LORD BURGHELY. On panel. *Presented by Dr. A. Gifford.*
67. MATTHEW PRIOR, by Hudson, from an original of Richardson. *Presented by the Earl of Besborough, 1775.*
68. PORTRAIT OF J. RAY, M.A., the Naturalist, by Mrs. Beale. *Bequeathed by Sir William Watson.*
69. WILLIAM CAMDEN. On panel. "Ætatis LVIII. MDCIX."
70. SIR ISAAC NEWTON, by Vanderbank. *Bequeathed by John Hatsell, Esq., Clerk of the House of Commons. 1821.*
71. JOHN RAY, M.A., the Naturalist. *This Portrait belonged to Sir Hans Sloane.*
72. JOHN SPEED, the historian. On panel.
73. ARCHBISHOP CRANMER, "Anno etatis 57, Julij 20," by Gerlach Flicke.\* "Gerlacus fliccius Germanus faciebat." On panel.

\* Gerlach or Gerbertus Fliccius. See Walpole Anecd. of Paint., by Dallaway, 8vo., Vol. I. 105. note.

*Presented, in 1776, by John Michell, Esq., M.P., of Bayfield Hall, Norfolk.*

74. WILLIAM SHAKSPEARE. *Presented by M. Maty, M.D.*

75. GEORGE BUCHANAN. A small portrait on panel. "*Ætatis 76, Año. 1581.*"

*Fifth Compartment.*

76. VOLTAIRE. *Presented by M. Maty, M.D., 1760.*

77. VESALIUS, on pannel, by Sir Antonio More. *This Portrait belonged to Sir Hans Sloane.*

78. AN UNKNOWN PORTRAIT. *Presented by Dr. A. Gifford.*

79. A PORTRAIT (called CHARLES I., when Prince). *Presented, in 1759, by Mrs. Elizabeth Gambarini.*

80. ANNA MARIA SCHURMAN, by John Lievens.

81. SIR FRANCIS DRAKE.

82. POPE CLEMENT X.

83. SIR ANTONIO MORE. On panel. *Presented by Dr. A. Gifford.*

84. COSMO DE' MEDICI and his SECRETARY BARTOL. CONCINI. A copy from Titian. *Brought from the Old Cottonian Library.*

85. MARTIN LUTHER, a small wh. l. on panel. "*D. Martinus Luter, 1546, 18 Febr. Ætatis 63. iaer.*"

86. PRINCESS MARY, afterwards Queen. "*Maria Princeps. Año Dom. 1531.*" "*I. B.*" initials of the painter. *Presented by Sir Thomas Mantel.*

87. GEORGE, TENTH AND LAST EARL MARISCHAL OF SCOTLAND. On copper; painted at Rome, 1752, by Placido Costanzi. *Presented by Lord Glenbervie.*

88. JEAN ROUSSEAU, employed in the Paintings of Montague House. *Presented by Mrs. Woolfryes, 1757.*

89. CAPT. WILLIAM DAMPIER, by Murray. *It belonged to Sir Hans Sloane.*

90. CARDINAL SFORZA PALLAVICINI, 1663. *Presented by Smart Lethieullier, Esq.*

91. ULYSSES ALDROVANDI, by Giorgione. *It belonged to Sir Hans Sloane.*

92. AN UNKNOWN PORTRAIT of a Gentleman in a ruff and long beard: "*Ætatis suæ 66, An. Dom. 1590.*" On panel.

93. ISABELLA, Infanta of Spain.

94. ST. EVREMOND. *Presented by M. Maty, M.D.*

95. SIR PETER PAUL RUBENS.

96. LANDSCAPE by Wilson.

97. JOHN GUTTENBERG, Printer. *Presented by Paul Vaillant, Esq.*

98. HENRY FREDERICK, PRINCE OF ORANGE. *Presented, in 1782, by Lord Fred. Campbell.*

99. JOHN LOCKE. *Presented by Matthew Maty, M.D.*

100. GOVERNOR HERBERT, by Devis. *Presented by Admiral Page.*

101. JAMES PARSONS, M.D. "*Ætat. 60 anno quo Benj. Wilson pinxit, 1762.*" *Bequeathed by Dr. Knight, 1772.*

102. JOHN WALLIS, D.D., the Mathematician.

103. MARY DAVIS, an inhabitant of Great Saughall in Cheshire, taken 1668, "ætatis 74." At the age of 28 an excrescence grew upon her head, like a wen, which continued 30 years, and then grew into two horns, one of which the profile represents.
104. SIR JOHN DODERIDGE. *Presented by Dr. A. Gifford.*
105. DR. GOWIN KNIGHT, 1st Principal Librarian of the British Museum, by Benj<sup>n</sup>. Wilson. *Bequeathed by Dr. Knight, 1772.*
106. FRANK OF BORSALIA, EARL OF OSTERVANT, who died in 1470.
107. ALGERNON SIDNEY.
108. ALEXANDER POPE. *Presented by Francis Annesley, Esq.*
109. UNKNOWN PORTRAIT, t. Cha. II.
110. PHILIP DORMER, EARL OF CHESTERFIELD, by Ramsay, 1765. *Presented by Sir Thomas Robinson, Bart. in 1777.*
111. RICHARD BAXTER. *Presented by Dr. A. Gifford, 1760.*
112. SIR HENRY VANE, JUN. *Presented by Thomas Hollis, Esq.*
113. LODOWICK MUGGLETON, "Aged 66, 1674."
114. THOMAS BRITTON, the musical small-coal-man, "Ætat. 61, 1703." By Woolaston.
115. MR. GEORGE VERTUE, the Engraver, "Æt. L. 1733." *Presented by his widow, 1775.*
116. ROBERT CECIL, 1ST EARL OF SALISBURY. On panel. *Presented by Dr. A. Gifford.*

G. W. REID.

\* \* The following Portraits, formerly Nos. 61, 84, 85, 87, 107, and 108, viz. Geoffrey Chaucer, 1400, a small whole length on panel; a Limning of Frederick III. of Saxony, by Lucas Cranach; the Portraits of Molière, Corneille, and an unknown head by Dobson, all on panel: with the Portrait of a Pope or Cardinal; on account of their diminutive size, have been transferred to the Print Room.



## GALLERY OF MINERALS AND FOSSILS,

CALLED THE

“NORTH GALLERY.”

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SITUATED in the upper story of the Building, the North Gallery is entered either from the lobby at the north end of the Gallery of Antiquities, or from the lobby at the corresponding end of the Bird Gallery. The rooms into which the North Gallery is divided are numbered I. to VI., and the numbers will be found over the doorways. The floor of the Gallery is occupied by Table Cases, which, in the Rooms I. to IV., contain the collection of Minerals; and, in Rooms V. and VI., are devoted to the fossil remains of Invertebrate Animals. The Wall Cases throughout the Gallery are occupied by—

## FOSSILS.

The Fossil remains are arranged partly in Zoological order and partly in Geological sequence; thus, the species of the natural families, such, for example, as the *Ammonitidæ* (shells allied to the Pearly Nautilus), and *Terebratulidæ* (Lamp-shells), are grouped together; but each family commences with the most recent examples of the group and terminates with those of the older rocks. The series of remains of *Vertebrata*, or animals with a back-bone, commences with the Fishes in Room II., is continued, on the walls facing the windows, to the last Room (No. VI.), and there returns in the Wall Cases near the windows, to terminate in Room III.

Some of the smaller objects belonging to this series will be found in the Table Cases under the windows. In the Lobby, between the Bird Gallery and the Gallery of Minerals and Fossils, is a restored model of the shell of an extinct Fossil Tortoise, of gigantic size, from the Siwalik Hills, in India. Portions of the shell and of other parts of the skeleton of several different individuals of this species of Tortoise (*Colossochelys atlas*), are deposited in Case 2 of Room III., and it is of casts from some of these portions that the restored model is, in a great measure, composed.

## ROOM I.

FOSSIL PLANTS.—Divisions A. & B. of Case 1 contain Vegetable impressions called *Algæ*, from their resemblance to Sea-weeds. They are found in rocks of all ages, and are almost the only Fossils met with in the very oldest strata. Division C. of the same case contains plants with small whirls of leaves (*Asterophyllites*), from the Coal-shale.

Case 2. Divisions A. & B. contain Coal-plants, called *Calamites*, with jointed stems and leaves in whirls, resembling the recent “Mare’s-tail” (*Equisetum*), in appearance; and the plants called *Vertebraria*, from the Indian Coal-field of Burdwan. Division C. is devoted to the stems of Tree-ferns from the Wealden and Green-sand.

In Divisions D., E., & F. is exhibited a fine series of Oolitic Fern-leaves from Scarborough, in Yorkshire; and leaves and stems from the Keuper and Permian of Germany.

On the top of Case 2 is exhibited a series of calamite stems from the coal of Yorkshire, and ferns from the Devonian of Ireland.

Case 3 is entirely devoted to Fossil Ferns, obtained from the shales overlying beds of Coal.

Case 4 contains the stems of Coal-plants, called *Lepidodendron*, from their scaly bark, resembling the recent Club-mosses (*Lycopodiaceæ*); but they attained the size of forest-trees. Examples of the foliage and fruit of these plants, contained in nodules of clay-ironstone, are placed in the next Case (5, A. B.).

Case 5. In this case are arranged portions of the trunks of Fossil-trees, with regular furrows and impressions, called *Sigillaria*. They are found in great numbers in most coal-fields, frequently retaining the erect position in which they grew.

The Fossils named *Stigmaria*, in this Case, and on the top of Case 4, are the roots of the *Sigillaria*. They occur in the fire-clay, beneath seams of coal. The example over the Gallery door originally measured 26 feet in length.

Over Case 5 are placed examples of the opalized trunks of a species of *Banksia* from Tasmania.

Case 6 contains, 1. Fossil Plants of the Kentish-Rag and Wealden strata, including a plant related to the Dragon-tree of Teneriffe; *Dracæna Benstedii*, from the Iguanodon Quarry at Maidstone. 2. Silicified stems of Palms from the West Indies. 3. Palm-leaves and palm-like Fruits (*Nipadites*), from Brabant, the wood of which was bored by a species of ship-worm (*Teredina*) now extinct. 4. Leaves of Cycadean plants from Scarborough, &c. 5. Fossil Fir-cones and Pine-wood, the latter from the cliffs on the coast of Norfolk, belonging to the Spruce Fir, a species which had become extinct in Britain, and has been reintroduced in modern times.

Over Case 6 are placed the silicified stems of *Mantellia*, plants related to the recent *Cycas*, and called “petrified crows’ nests” by the Portland quarrymen.

The small Table Case under the window contains leaves of Dicotyledonous Plants, from the Tertiary Limestone of Œningen.

The slabs of Sandstone on the North Wall of this Room, with the tracks of an unknown animal, called *Chirotherium*, probably amphibious, with large hind feet, like some *Batrachians*, are, that on the left, from the quarries of Hildburghausen, in Saxony; and that in the centre, from Stourton Hill quarry, near Liverpool (the latter presented by J. Tomkinson, Esq.). On the right hand are placed slabs also supposed to be of the New Red Sandstone formation, with equally remarkable impressions of various dimensions, called *Ornithichnites*, being regarded as the foot-marks of birds. They occur in the Sandstone beds near Greenfield, Massachusetts, at Turner's Falls, in the Connecticut River. Other slabs from the same locality, and also from Cheshire and Staffordshire, covered with reptilian footprints, are placed on Wall Cases 1 and 11 of Room III.

## ROOM II.

The classification of the *Fossil Fishes*, arranged in this room, is chiefly in accordance with that proposed by M. Agassiz, in his great work, entitled "*Recherches sur les Poissons Fossiles*," with some modifications founded upon the later systems proposed by Professors Müller and Owen. The series commences with the *Placoid* Fishes, or those of the Shark and Ray tribes, in which the skin is protected by rounded (often star-shaped) and very hard scales, having frequently a raised point, and sometimes a thorn-like prickle in the centre, as may be seen in the scales of the Thornback and some other fishes of the Skate tribe. The upper division of the tail is prolonged beyond the lower lobe, and is supported by a continuation of the vertebral column—a form of tail which is termed *Heterocercal*, and which is most commonly found in all the orders of fishes of the middle and older Geological formations; but which (if we except the Sharks and Rays) is rarely met with in the existing species of fishes, in which the "homocercal" tail, or that with the two lobes equal, prevails.

The skeleton of the *Placoids* being more or less gristly, and in the same degree perishable and incapable of fossilization, the remains of those fishes consist chiefly of the defensive spines, scales, and teeth; these objects, being mostly of small size, will be found in the Cases under the windows, and in Case 7 at the end of the room.

The Fishes called *Ganoids* have derived their name, and the character of their order, from the lustre of their very hard, enamelled scales; and it is by these parts that they are chiefly represented in the fossil state. The most common form of scale in this order is the rhomboidal, in a few it is round; but the pattern of the external markings varies in almost every species.

GANOID FISHES range from the newest Silurian strata upwards; are most abundant in the lower Oolitic formations, diminish in the cretaceous beds, and are reduced to very few genera existing at the present time.



The order is commenced in Wall Case No. 1, by the *Cephalaspides*, a family peculiar to the Devonian period. The species of which it is composed were fishes in which the body was protected by large bony plates, was convex above, and flat beneath; the pectoral fins were represented by large bony appendages, situated close behind the head; and the tail was tolerably long, tapering, and furnished with small scales. The second family of the order, the *Cœlacanthi*, so called from the spines of their fins being hollow, occupy the compartments 3 to 5 of the same Wall Case. In the 6th compartment are arranged the *Dipterines*, including fishes of the Old Red Sandstone and Coal formations, having the body protected by rhomboidal scales, and provided with two back fins, as well as two anal fins. The specimens exhibited are chiefly from Scotland. In the 7th compartment are arranged the Acanthodians. The fishes of this family are characterized by the minuteness of their scales and having each fin armed with a strong bony spine. They are mostly from the Devonian of Scotland.

The family of the *Sauroids* (see compartments 8 to 12), contains fishes which exhibit both the uneven-lobed and the even-lobed structure of tail, and is divided accordingly into two minor groups: the *Sauroids* have conical teeth mixed with minute prickly teeth. The scales vary considerably in form. This family presents living examples in the Bony Pikes (*Lepidosteus*) of the rivers and lakes of North America, and in the Bichirs (*Polypterus*) of the Nile. The *Sauroid* family is represented by numerous extinct species ranging through nearly all geological strata down to the Devonian.

The Ganoid family called "*Lepidoids*" (see compartments 13 to 21) have the same rhomboidal scales as the Bony Pikes, but in general form they are shorter and have a greater vertical diameter; the teeth are of one kind only, and of a more or less conical form.

The last family of the fishes with ganoid scales is the *Pycnodonts*, of which all the principal genera will be found in compartments 21 and 22. Like the members of the preceding group, these fishes have a short, high, and compressed form. Their teeth are usually large, rounded, and with low crowns admirably fitted for crushing shell-fish. Many of the species are from the Jurassic (or Oolitic) rocks; some are from the Chalk, and a few extend into the Tertiary formations, but there are no known living species.

In the preceding two great divisions of Fishes many of the families of which they are composed are extinct, and a very large proportion of the species is confined to the geological strata beneath the Chalk, whilst those which now come under consideration belong entirely to the Chalk and Tertiary formations, and the families have living representatives. They form two important sections—the *Ctenoids* and the *Cycloids*. The *Ctenoids*, which are distinguished by their scales being serrated, or finely notched at the free edge, are arranged in compartments 23 to 26: the common Perch is a good example of this group. The *Cycloids* occupy the compartments 27 to 36. Their scales have the edges smooth. The Fishes of the Mackerel tribe (*Scomberidæ*), of the Carp tribe (*Cyprinidæ*), of the Pikes (*Esocidæ*),

and the Herrings (*Clupeidæ*), may be noticed as forming the more important families of this division.

### ROOM III.

Excepting the two Cases 7 and 11, the whole of the Wall Cases in this room are devoted to Reptilian remains; and amongst them may be first noticed the *Dinosauria*, which group contains the largest terrestrial species, such as the Iguanodon and Megalosaurus. In the Middle Case (No. 9), on the north side of the room, are arranged the remains of the gigantic Iguanodon: firstly, and in the centre, the large slab of Kentish rag from Mr. Bensted's quarry near Maidstone, containing a great portion of the skeleton of a young individual; to the right of this will be found portions of the skull and lower jaw, and the teeth of different specimens of the same species; and to the left, extending to Case 8, are nearly all the more characteristic parts of the skeletons of various Iguanodons, chiefly from the Wealden formation at Tilgate, and in the Isle of Wight. These specimens are mostly from the collection of the late Dr. Mantell. On the lower shelves to the right of the centre case containing the *Iguanodon* will also be found the almost entire remains of another land reptile called *Scelidosaurus*, from the Lias of Charmouth, Dorset. The remainder of the Case to the left (No. 8) is occupied by the remains of other gigantic reptiles from the Wealden and upper Oolitic formations, including the Megalosaurus and Cetiosaurus. On the right of the centre Case No. 10, in the two first compartments, will be found the remains of the Hylæosaurus, including the large block from Tilgate Forest, discovered by Dr. Mantell, which contains a considerable series of vertebræ, dermal spines, and other parts of this singular reptile. The dermal spines and other remains of the *Polacanthus*, a new Wealden reptile from the Isle of Wight, are arranged in Case 9; and on the top of the same Case is a new species of *Plesiosaurus* (*P. laticeps*, Owen), which has recently been added to the collection.

The remainder of this Case is occupied by the fossil Crocodiles.

Among the specimens may be noticed the slender-snouted Crocodilians, in which the vertebræ are bi-concave, including the *Teleosaurus Chapmanni*, from the Lias of Whitby, and other Teleosauri from the Lias and Oolites of Germany and France. Among the Crocodilians with the ordinary form of vertebræ, the body, or central part, being concave in front and convex behind, attention may be directed to the skull of the *Crocodylus Toliapicus*, mentioned by Cuvier as the "Crocodile de Sheppey," and a smaller Crocodile skull, which, like the last, is from the London Clay of Sheppey, and received the name of *Crocodylus Spenceri* from Dr. Buckland. The most gigantic Crocodilian remains hitherto found are those from the Siwalik Hills, they include both examples of the true Crocodiles and of the long and slender-snouted Gavials.

The Reptilian series is here interrupted by a collection of Bird remains, which occupy the Wall Case No. 11 at the end of the room.

With the exception of the cast of the egg, and portions of leg-bone of an extinct wingless bird from Madagascar (the *Epyornis maximus*), the contents of this Case are all from New Zealand, and were found in a deposit which there are good grounds for regarding as of very recent origin. Part of the series was collected by Mr. Percy Earl, in the Middle Island, and the remainder by Mr. Walter Mantell in the North Island. These Bird remains are referred by Professor Owen to several species, and, indeed, to distinct genera of birds, some of which are still living in New Zealand, whilst others are, most probably, extinct. Amongst the living species may be noticed the *Notornis Mantelli*, a very large species of the Rail family. The first indication of this bird was given by some fragments of the skull found with remains of other birds, in superficial deposits of New Zealand, by Mr. W. Mantell. The living bird was subsequently discovered by Mr. Mantell in the middle island of New Zealand, and the specimen which he obtained is deposited in the Museum.\* The greater portion of the bones, as determined by Professor Owen, belongs to a genus of birds to which the Professor has applied the name *Dinornis*: the birds of this genus were wingless, of large size, and some of gigantic proportions. The *Dinornis giganteus* (of which there are numerous parts of the skeleton in the collection) must have been from ten to eleven feet in height. In the *D. elephantopus* the bones of the legs are as thick as those of the *D. giganteus*; but they are much shorter. Two legs of an equally large kind (*Dinornis robustus*) allied to the last-mentioned bird, bones of a leg of a still larger species (*Dinornis maximus*), and an entire skeleton of the *D. elephantopus*, will be found, set up, in Room No. VI.

To return to the Reptilian remains. The series is continued in the Wall Case 1, where, in a large slab of Purbeck stone, from Swanage, is imbedded a considerable portion of the skeleton of the "Swanage Crocodile," *Goniopholis crassidens*.

Here also are deposited the Pterodactyles, or Flying Lizards from the Lias and Oolites of England and Bavaria. Other specimens of this group, from the Cretaceous Deposits, are arranged in Table-case No. 16, Room IV.

In the corner Case are portions of the skull, lower jaw, &c., of a gigantic Reptile, allied to the Lizards; it is from the upper chalk formation at Maestricht; also specimens from the Chalk of England and the Eocene Tertiary of Alabama, United States. The most instructive illustration of this Reptile is the cast of a nearly entire skull, presented by Baron Cuvier, who published a detailed account of the animal in his great work on Fossil Remains, adopting for it the name *Mosasaurus* (Crocodile of the Meuse), proposed by Conybeare.

In Case 2 will be found the remains of a gigantic land-lizard (*Megania*) from recent deposits in Australia, now believed to be extinct. The majority of the fossils here exemplify the large and very remarkable Reptile, called Dicynodon, discovered in South Africa by Mr. A. G. Bain.

\* It will be found in the Bird Gallery.—See Case No. 133.



The animal is especially remarkable, inasmuch as, although it belongs to the Lizard tribe, it possessed but two teeth, and these in the form of large tusks, descending nearly vertically from the upper jaw. Here are also placed various Batrachian remains from the Coal-measures, the Trias, and Tertiary formations, among which may be specially mentioned the head of *Belodon Kapffii* from Stuttgart, and the gigantic Salamander from Oeningen (better known as the "*Homo Diluvii testis*," of Scheuchzer).

At the end of the Case are placed various bones of the skeleton and parts of the shell of the enormous Tortoise from India, of which a restored model will be found in the Lobby to Room No. I.

In Case 3 are the remainder of the Fossil Tortoises and Turtles; and in Cases 4, 5, and 6, commences the series of the large Sea-reptiles (ENALIOSAURIA). They present two well-marked modifications of structure—the Plesiosaurs, in which the neck is long and the head small, and which are arranged in this room; and the Ichthyosaurs and *Pliosaurus*, in which the head is large, and joined to the body by a very short neck.

On the Wall Cases 4-6, 8, and 9, are arranged fine examples of this group, including *Plesiosaurus dolichodeirus*, and *rostratus*, and a fine head of *Pliosaurus grandis* (the teeth of this latter are placed in Wall Case 5).

The Wall Case No. 7, at the end of the room, contains Mammalian remains of the Ruminant tribe from the Siwalik Hills and other parts of India.

#### ROOM IV.

Here the series of Reptilian remains is continued, by the Sea-reptiles already alluded to in the account of the preceding room, the Ichthyosaurs occupying the Wall Cases 1-5. In Wall Cases 6 and 7 is continued the suite of Mammalian remains belonging to the order Ruminantia; Case 6 contains the Cervine remains, and Case 7 the Bovine, the heads and antlers being placed on the top of the Cases.

In a series of small Table Cases beneath the windows are placed various remains of Reptiles, Birds, and Marsupials: Case No. 12 contains the remarkable long-tailed Bird from Solenhofen (the *Archæopteryx macrura* of Prof. Owen). The bones of the wings, the blade-bone and furculum, or "merry-thought," the bones of the legs and feet, are those of the bird-class; but the tail is long and many-jointed, with a pair of feathers to each joint; these and the quill feathers and "under-coverts" of the wings are beautifully exemplified by impressions left in the peculiarly fine-grained "lithographic" limestone in which this unique specimen of a bird of the Oolitic or Mesozoic period has been fossilized. A series of Fossil Sponges from the Chalk and Green-sand formations is displayed in one of the window recesses of this room.

## ROOM V.

Here the Wall Cases are occupied by Mammalian remains.

In Case VI. are placed the Fossil *Carnivora* (the Cave-Lion, Hyæna, Wolf, &c.). In Cases I. and II. are arranged (1) the remains of the Cave-Bear and other *Ursidæ*; (2) the Cetaceans, *Ziphius*, *Zeuglodon*, &c.; (3) a large series of *Hippopotami*, remains of which are less common in England; the specimens in the Wall Case are chiefly from fresh-water formations in Italy, France and India. The existing Hippopotamus is restricted to the Continent of Africa.

Cases III. to V. contain various other Pachyderms from England, France, Germany, Italy, and India. Remains of several species of *Rhinoceros* from each of these countries are exhibited, together with the Horse, *Hippotherium*, Tipir, *Paleotherium*, *Anoplotherium*, Pig, &c. In Table Case No. 13 are arranged remains of several small Mammalia, including the Monkey, Bat, Beaver, &c.

In the centre of this Room is a fine entire skeleton of the gigantic Irish Deer (*Cervus megaceros*), a series of antlers of which is placed on the Wall Cases, where are also exhibited a collection of skulls of Ruminants from India.

In the Table Cases of the rooms Nos. V. and VI. are arranged the Fossil species of the Invertebrate classes (animals without back-bone), called *Mollusca*, *Articulata*, and *Radiata*.

CORALS (*Zoophyta*). In Table Cases 16 and 17, Room V., are exhibited a series of Tertiary and Cretaceous Corals; Oolitic corals, chiefly from Steeple-Ashton, Wilts; polished sections of "Madrepores," from the Devonshire marble; and Silurian Corals from Dudley and North America, including fine examples of the "Chain-coral" brought home by the Arctic expedition under Captain Kellett.

A portion of Case 15 is occupied with the POLYZOA, horny corallines, most of which are found in the sea encrusting shells and stones, and which are now considered to be more nearly related to certain low forms of MOLLUSCA (the *Tunicata*) than the ZOOPHYTA.

The remainder of the Case is occupied with NUMMULITES (*Foraminifera*); numerous examples of these small chambered shells, resembling *Nautili* and *Ammonites* in form, but constructed by creatures of a more simple organization. The larger sorts are most abundant in the Older Tertiary rocks ("Nummulite limestone") of Europe, Africa, and India, such as that of which the Great Pyramid is built.

Two instructive series of enlarged models of these, for the most part, microscopic forms are placed in this case: one series by M. D'Orbigny, the other by Drs. Reuss and Fritsch.

STONE LILIES (*Crinoidea*). Case 19, Room V., contains a beautiful series of these once abundant forms of stalked Star-fishes, now so exceedingly rare in a living state. They are represented by forms from the Silurian, Carboniferous, Liassic, Oolitic, and Cretaceous formations. The most noteworthy are the *Crotalocrinus rugosus*, from Dudley; the group of heads of *Pentacrinus briareus*, from Charmouth,

Dorset; the series of Lily Encrinites (*Apiocrinus Parkinsoni*), from Bradford; and of *Marsupites Milleri*, from Kent and Sussex.

In this Case is also placed the unique example of the *Solaster Moretonis*, a large many-rayed Star-fish from the Oolite of Gloucestershire, presented by Earl Ducie.

SEA-URCHINS (*Echinidæ*). Case 22, Room VI. These are arranged in four principal groups. 1. Those from the *Tertiary* strata, of which the most remarkable are the large *Clypeasters* from Malta. 2. The *Chalk Echinidæ*, amongst which are the Helmet-urchins (*Ananchytes*), popularly known as "fairy-loaves;" the Heart-urchins (*Spatangidæ*), called "fairy-hearts;" and numerous species of *Cidaris*, provincially termed "shepherd's crowns;" some of the specimens have spines still attached to the shell. 3. The *Jurassic* or *Oolitic Echinidæ*, and the Sea-urchins from the *Trias* and older rocks, which include many singular forms of the spines or locomotive organs.

WORMS (*Annelida*). One half of Case 18, Room V., is occupied with examples of the tubes, or shells, of fossil Annelids (*Serpulæ*). One species, known as the *Vermicularia Bognoriensis*, makes an almost regularly convoluted tube, like a snail-shell; a mass composed of these tubes is placed in this Case, and another upon the Window-sill adjoining.

FOSSIL INSECTS (*Articulata*). The other half of Table Case No. 18, Room V., contains the Insect remains, consisting of the wing-covers (*elytra*) of beetles from the *Oolitic* strata of Purbeck and Stonesfield, and Dragon-flies (some in their larval state), from Solenhofen and Ænigen. There is also the wing of a large flying insect, resembling the living *Corydalis* of the United States, in a nodule of clay-ironstone from Coalbrook Dale.

Fossil insects may be seen in some of the specimens of amber in the Table Case No. 60, Room I.

CRUSTACEA,—CRABS AND LOBSTERS. Cases 7 and 9, Room VI., contain the exhibited portion of this class. The first half of Case 9 contains the *Cirripedia*, represented at the present day by the Ship Barnacle and the Acorn-shell. The second contains the Bivalved Crustacea, Phyllopods and Ostracods; and the *Eurypteridæ* and *Limulidæ*, or King-Crabs. The gigantic *Eurypteridæ* are extinct, but the King-Crab is found living at the present day. A fine example of *Limulus*, from Solenhofen, and of *Slimonia*, from Lanarkshire, are placed in this case. Other examples occupy the Window.

Case 7 contains the *Trilobita*, the *Isopoda*, and the *Decapoda* (Crabs and Lobsters). Of the Trilobites, by far the greater part are from the Wenlock Shale and Limestone of Worcestershire and Staffordshire, and the Silurian rocks of Bohemia. The "Dudley Locusts" (*Calymene Blumenbachii*) and the great "Barr Trilobite" (*Illanus Barriensis*) are among the earliest fossils known to science. Fossil Lobsters are found to extend from the Coal Measures to the present day; whilst true Crabs first appear in the Upper Oolite. Specimens from the Lias of Lyme, the Oolite of Solenhofen, and the London Clay of Sheppey, are most deserving of attention.



The FOSSIL SHELLS (*Mollusca*) are divided into four groups:  
 1. Lamp-shells (*Brachiopoda*). 2. Ordinary Bivalves (*Conchifera*).  
 3. Spiral Univalves (*Gasteropoda*). 4. Chambered Univalves (*Cephalopoda*).

LAMP-SHELLS (*Brachiopoda*). Cases 2 and 3, Room VI. Those from the *Tertiary* strata belong to existing genera, and some to existing species; but others, like the great *Terebratula* of the Suffolk crag, are unknown in a recent state. The *Chalk* species are no longer living, and belong chiefly to the genera *Terebratula*, *Thecidium*, *Rhynchonella*, and *Terebratella*, of which all, excepting the last, appear to be verging towards extinction, or are scantily represented by existing species.

The FOSSIL BIVALVES (*Conchifera*), and SPIRAL UNIVALVES (*Gasteropoda*), have been arranged in parallel groups, according to their geological age.

#### TERTIARY FOSSIL SHELLS.

1. NEWER PLIOCENE. Table Case (11), Room VI., contains a series of Shells from raised sea-beds and beaches in Scotland, Sweden, and North America: these shells are of a more Arctic character than those now living in the adjacent seas. Table Case (11) contains a similar series from Sicily.

2. OLDER PLIOCENE. Table Case (10), Room VI., contains Shells from the "Crag" of the eastern counties, of which more than half are still existing, either in British Seas, in the Mediterranean, or on the coasts of Norway and North America.

3. MIOCENE, or "Middle Tertiary." To this period are referred the Shells from Touraine and Bordeaux (Case 6), from Malaga (Case 4), Shells from St. Domingo (Case 11), Room VI.; and part of those collected by Sir C. Lyell in the Canary Islands and Madeira (Case 13).

4. EOCENE TERTIARY, or London Clay and Paris Basin (Cases 4, 5, and 8), Room VI. Not any of these can be certainly identified with living Shells; and the species which they may resemble are now found at the Cape of Good Hope, the western coast of South America, and other localities remote from those where the fossils have been found.

#### SHELLS OF THE SECONDARY STRATA.

5. Chalk, Gault, and Green-sand (CRETACEOUS SYSTEM). (Table Cases 1 and 2, Room V.) The characteristic Shells of the Chalk are *Inocerami*, related to the recent Pearl-oyster; *Spondyli*; Scallops (*Pecten*), of peculiar form; "Cockscomb" oysters, and species of *Lima* and *Pleurotomaria*. One peculiarity of the Chalk Fossils is, the constant absence of the interior pearly layers of the shells, which have been removed subsequent to their imbedding. In the Green-sand strata, *Trigonia* abound, and peculiar bivalves, of an extinct family (*Hippuritida*), related to the recent *Chama*. Case 1, Room VI.)

6. JURASSIC, or OOLITIC SHELLS. (Cases 2 and 3, Room V.) The

shells of the Portland stone, Bath stone, and other Oolitic rocks, and of the Lias, include numerous species of *Trigonia*, the internal casts of which are often found, whilst the shells have been dissolved and removed from the rock; they are called "horse-heads" by the quarry-men, and are sometimes silicified, and contain traces of the shell-fish itself. Amongst the Oolitic oysters, are some whose shells have been moulded on *Trigonia* and *Ammonites*.

7. The SHELLS OF THE TRIASSIC SYSTEM in Case 4, Room V., consist of the original specimens figured and described by Dr. Klipstein, in his work on the fossils of the salt-marls and Alpine limestone of Austria.

#### PALÆOZOIC SHELLS.

8. MAGNESIAN LIMESTONE (Permian), of Northumberland and Durham. (Case 4.)

9. CARBONIFEROUS LIMESTONE, and Coal-measures of Britain and Belgium. (Cases 4 and 5.) Chiefly from the collection of Professor De Koninck, of Liege.

10. DEVONIAN SYSTEM. (Case 5.) Devonshire and the Eifel.

11. SILURIAN SYSTEM. (Cases 5 and 6.) Presented by Sir Roderick Murchison, Bart., K.C.B.

#### CHAMBERED SHELLS (*Cephalopoda*).

The Shells of the chambered univalves (*Cephalopoda*), related to the recent Nautilus and Cuttle-fish (*Sepia*), are placed in the Table Cases (7 to 12 and 14) of Room V., and are grouped in geological order.

Those of the Chalk, Gault, and Green-sand, include the collection of M. Astier from the south of France; and the oolitic series has recently been enriched by the collection of M. Tesson, of Caen.

In the Window Recesses of Room V. are placed some of the larger *Cephalopoda*.

#### ROOM VI.

Room VI. is occupied chiefly by the osseous remains of the Edentata (quadrupeds without front teeth) and large Pachydermata (thick-skinned herbivorous quadrupeds), such as the Elephants and Mastodons. Of the Edentate order of quadrupeds, the most striking example is presented by the skeleton of the Megatherium. The remains of this animal have been met with in the southern parts of South America, and more especially in the region of Buenos Ayres. A slight acquaintance with the bony framework of animals may enable the visitor to appreciate the enormous muscular power which this animal must have possessed; the huge Mastodon near it must have been a comparatively feeble animal. The strength of the Megatherium is indicated by the form of the bones, and especially their tubercles and ridges, to which the muscles were attached. In the fore parts of the body the framework is comparatively slender; the contrary is the case with the hind

quarters, where enormous strength and weight are combined, indicating that the animal habitually rested on its haunches and powerful tail, and whilst in that position could freely use its flexible arms, and the large claws with which its fore-feet were provided.

The affinity of this animal to the existing Sloth is evident, from the structure of the skull, blade-bone, &c.; the teeth are the same in number, kind, structure, mode of growth, and mode of implantation, as in the Sloth, whence the similarity of food may be inferred; but the different proportions and colossal bulk of the *Megatherium* indicate that instead of climbing trees, like the Sloth, it uprooted and tore them down, to feed upon the leaves and succulent branches.

This skeleton is composed, in part, of casts of bones, in the Museum of the Royal College of Surgeons, brought from Buenos Ayres by Sir Woodbine Parish, and, in part, of casts of bones of the same species and size in the British Museum. In the Wall Case No. 4, between the windows, is deposited an extensive series of the bones of different individuals of the *Megatherium*, all of which are from the region of Buenos Ayres. In Case No. 3 are deposited the bones of allied animals, *Scelidotherium*, *Mylodon*, &c., also from South America. On the stand with the *Megatherium* is placed a portion of a carapace or shell of a species of *Glyptodon*, an extinct genus nearly allied to the *Armadillos*, and of which several species have been discovered in South America. In some of these species the carapace must have been from ten to twelve feet in length: in all, as in the smaller species here exhibited, it was devoid of those "bands" or "joints" which give it flexibility in the small existing *Armadillos*. In the Wall Case, at the end of the room, may be seen the tail, with the bony sheath, of two of the largest kinds of *Glyptodon*. In the centre of the Room has been placed the cast of an entire carapace, with the singularly-armed tail-sheath of this animal; and on the tops of the Wall Cases are considerable portions of the carapaces of species of *Glyptodon*.

The Elephant remains exhibited in the Wall Cases opposite the windows have been referred by Dr. Falconer to nine species; viz., three European, and six Indian; but of the European species one (the Mammoth) is common to the northern parts of Europe, Asia, and America: a skull of this animal, found at Ilford, in Essex, having tusks of ten feet eight inches in length, has been recently set up in the middle of the Room. The *Mastodon* genus presents three European species (one of which is found in England), three species from India, one from North America, and one from South America. The *Mastodon* of which the entire skeleton is mounted in Room VI. is of the North American species (*Mastodon Ohioticus*). All these species of Elephant are extinct; that is to say, not any of them resembles either of the two living species, the African and Asiatic Elephants; and of the genus *Mastodon* there is no living representative. The European *Mastodons* are found in strata which are more ancient than those which contain the Elephant remains; but the



Indian species of Mastodon were coeval with the fossil Elephants from the same country. The two genera, *Elephas* and *Mastodon*, have much resemblance in most of the characters exhibited in their skeletons, but they differ considerably in their dentition. In the Elephant the grinding tooth is made up of a number of flattened plates cemented together, each plate being enclosed by enamel; the enamel being considerably harder than the other substances which compose the tooth, wears less readily, and hence projects in the form of transverse ridges on the crown of the tooth, which has been subjected to much attrition. The crown of the tooth in the Mastodons presents, before it is worn, a number of conical prominences, which are more or less united in the transverse direction of the tooth, so as to form high ridges.

Nearly allied to the Mastodons is the extraordinary animal the *Dinotherium*, of which the skull, lower jaws of individuals of different ages, and detached teeth, will be found in Wall Cases No. 2, between the windows. Here it will be seen that the large tusks with which the animal was provided, instead of being in the upper jaw, are implanted in the lower jaw, and are directed downwards.

In Wall Case No. 1 are exhibited fossil remains and casts of large extinct quadrupeds of the Marsupial, or pouched order, which have been recently discovered in tertiary formations in Australia. Of these the most gigantic is the *Diprotodon Australis*, the skull of which measures upwards of three feet in length, and exhibits a dentition corresponding, in the number of teeth and in the shape of the grinders, with that of the Kangaroo, but resembling that of the Wombat in the large size and curvature of the front incisors. Some of the bones of the *Diprotodon* nearly equal in size the corresponding bones of the Elephant. A fossil lower jaw, and the cast of the skull of a smaller herbivorous marsupial quadruped (*Nototherium Mitchelli*, Owen), are here shown. This animal equalled an ox in size. The largest aboriginal quadrupeds now known to exist in Australia are the great Kangaroos; and it is to the Kangaroo family that the above-named extinct species present the nearest affinities. In this Case is also placed remains of a large Marsupial Tiger, the *Thylacoleo carnifex*, from Darling Downs, near Sydney, and of the great Wombat (*Phascolomys gigas*).

At the end of the room opposite the entrance doorway, is the Fossil Human Skeleton brought from Guadaloupe in the West Indies by Sir Alexander Cochrane, and presented to the Museum by the Lords Commissioners of the Admiralty. Human skeletons are found in the island just mentioned in a solid and very hard limestone rock, which occurs on the sea-shore at the base of the cliffs, and which is more or less covered by the sea at high water. The rock is composed of sand, the detritus of shells and corals of species still inhabiting the adjacent sea; it also contains some species of land shells, identical with those now living on the Island: and, accompanying the skeletons, are found arrow-heads, fragments of pottery, and other articles of human workmanship. Beneath this specimen are placed masses of stalagmite containing imbedded bones and skulls, the remains of aborigines, from

the ossiferous cavern of Bruniquel in the South of France. On the lower shelves of the two adjoining cases are placed other human remains, together with worked implements of stone and bone, and numerous horns, teeth, and bones of the Reindeer, gigantic Ox, Ibex, Chamois, Wild Horse, Bird's bones, &c., the remains of the animals which served as food for the men of the Flint Period in that part of Europe.

On the upper shelves of the Cases to the right and left of the Human Skeleton are arranged numerous mammalian remains from South America.

The gigantic Bird Skeleton (*Dinornis elephantopus*, Owen), in the middle of the room, together with the legs of a second species of more slender proportions, and of much greater height (the *Dinornis robustus*, Owen), form part of the series of Bird-remains discovered in New Zealand, which are arranged in Room III., and referred to in the account given of the principal objects displayed in that room.

In the Islands of New Zealand, where alone remains of the *Dinornis* have been found, no similar wingless bird is now known to exist of larger size than the Kivi (*Apteryx Australis*), which does not exceed two feet in height, and which is also peculiar to New Zealand.

GEORGE R. WATERHOUSE.

## NORTH GALLERY.

THE six rooms forming the North Gallery are numbered over the doorways. The first four of these rooms contain sixty large and four small Table Cases in which the Collection of Minerals is displayed, besides two Cases containing the Meteorites. The Wall Cases and a few small Table Cases in these Rooms, and the whole space in Rooms V. and VI. are devoted to Fossils.

### THE MINERAL COLLECTION.

The sixty large Table Cases containing the Minerals are numbered consecutively. Commencing at the east end of the Gallery in Room I. and passing down the south side of the four rooms, the numbers return up the north side, the sixtieth table standing opposite to the first. Corresponding with this order of the numbers on the Table Cases is that of the Minerals arranged in them.

The following sketch will serve to indicate the general features of the arrangement, and, by giving the numbers of the particular Table Cases, through which the principal divisions, classes, &c., are distributed, it will serve as a guide for finding any particular Minerals. The names of the species, as well as of important varieties, will be found within the Table Cases, associated with the Minerals to which they belong.

At the eastern end of Room I., adjoining the wall, are two glazed Cases. In these, the important Collection of Meteorites is displayed. In Case A. are seen the stony varieties, the "Aërolites." Of these there are a large number characterized by the presence of minute stony spherules. They are the "Chondritic" Aërolites: they all contain meteoric iron in fine particles disseminated through them, and the more chondritic varieties are on the left hand side of the Case. Among other kinds of aërolites the carbonaceous stones that fell at Cold Bokkeveldt, Kaba, Grosnja, and Montauban, on the right hand end of this Case, are remarkable. So is the great chondritic aërolite that fell at Parnallee, in Madras, on February 28, 1857; presented



to the Museum by Sir Wm. Denison, the Governor of that Presidency. In Case B. are displayed, on the left extremity of the Case, the Siderolites, while the rest of the space is occupied by the Aëro-siderites. The former are masses of meteoric iron containing stony matter; the latter consist of the metallic alloy of iron and nickel, with small amounts of other metals, known as "meteoric iron." They also contain mechanical admixtures of compounds of these metals with phosphorus, and also with sulphur. The crystalline structure of the mass is often very effectively shown by the etching of the polished surface. On the north side of this room is seen the vast mass of meteoric iron found at Cranbourne, near Melbourne, in Australia, presented by Mr. Bruce, of Inverquhomery, and weighing above  $3\frac{1}{2}$  tons. At the east end of the gallery is one weighing 1,400 lbs., presented by Sir Woodbine Parish, found on the Grand Chaco, South America.

The Collection of Minerals is arranged in four principal Divisions. These are—

Div. I. The Native Elements. Cases 1, 2, 3, 4 (i.)

Div. II. The Compounds of Metals, with Elements of the Arsenic Group (the Arsenoids, viz. Bismuth, Antimony, and Arsenic); or with elements of the Sulphur Group (the Thionids, viz. Tellurium, Selenium, and Sulphur); or with elements belonging to both groups. Cases 4 (ii.) to 12 inclusive.

Div. III. The Compounds of Metals with elements of the Chlorine Group (the Halogen elements— Iodine, Bromine, Chlorine and Fluorine). Cases 13 and 14.

Div. IV. Compounds of elements with Oxygen. Cases 15 to 60.

These Divisions are again subdivided into sections and classes, the latter embracing the minerals which fall under the same general chemical denomination; as, for instance, the salts of the same acid or of a group of acids chemically and crystallographically equivalent to each other. Each class is further separated into distinct chemical series, the minerals included in any series being such as are designated by the same or equivalent typical formulæ. Subordinated to this chemical system of classification is the final distribution of the several homotypical species of each *chemical* series, into distinct *crystallographic* series, arranged according to the crystalline system to which they belong; the order of sequence of these systems being—1st, the Cubic System; 2nd, the Dimetric or Pyramidal System; 3rd, the Trimetric or Prismatic System; 4th, the Hexagonal or Rhombohedral System; 5th, the Monoclinic or Oblique System; 6th, the Anorthic System; and finally, Amorphous substances, that either present no crystalline forms, or the forms of which, if they be crystalline, are not determinable. In

the following observations the term "group" will be reserved to connect Minerals, whether individual species, series, or classes, which present such a community of physical and other characters as imparts to them a sort of family resemblance.

#### DIV. I. THE NATIVE ELEMENTS.

In Cases 1, 2, 3, and the first half of 4, are arranged such of the elementary forms of matter as are found occurring in nature in the combined state. These native elements, which form but a small proportion of those the chemist has eliminated from the Mineral Kingdom, are arranged in sections, of which the first is that of the native metals and their alloys. Cases 1, 2, 3, 4 (i.)

Of the series of native metals crystallizing in the cubic system the various forms of Copper, Silver, and Gold are the most important; and crystals of these metals are exhibited, remarkable for the perfection of their forms, or conspicuous for their size. The crystallized copper from Siberia and from Lake Superior, the silver in crystals from Kongsberg and from Freiberg, as well as a fine octohedron of gold from Brazil, and two unique nuggets of crystallized gold from MacIvor Diggings, in Australia, and one from California, are especially worthy of remark. Cases 1, 2. Besides these, will also be seen native foil of silver and of gold: moss-like filamentary aggregations of copper and of silver; nuggets, and washed grains of gold, and specimens of all these metals, in which a simple crystalline form, by being repeated or prolonged along particular axes has built up dendritic, ramose, capillary, and other singular kinds of structure. Among the specimens of gold and of *electrum*, or argentiferous gold rich in silver, from Transylvania, are some worthy of notice from the sharpness of their crystalline forms. The rhombohedral series of metals includes an isomorphous group—the Arsenoids—namely, Arsenic, Antimony, and Bismuth, with which its crystalline form, rather than its chemical analogies, associates the rare native element Tellurium. Case 2.

Next to the metals are arranged the Metalloids, a section including the carbon group and the sulphur group. In the former, elementary Carbon is illustrated in its two allotropic mineral forms: Diamond and Graphite. Of the Diamond, a large and extremely choice series of crystals is exhibited, together with models of the most famous for their size and history of the specimens of this, the hardest and most resplendent of gems. Case 3 (i.)

Of Sulphur, the vast yellow crystals are among the most splendid of the mineral productions of the earth. The glazed front of Case 2 contains specimens belonging to this division, of extraordinary size and beauty. Case 3 (ii.)

#### DIV. II. COMPOUNDS OF THE ARSENOID AND THIONID ELEMENTS.

Leaving the native elements, we enter upon minerals which are the products of the chemical combination of the elements with each Cases 4 (ii.) to 10 (i.)

other; but the transition is not an abrupt one. The alloys, or mixtures of metals of one and the same group, were associated in the first division with the metallic elements that compose them. But where metals belonging to distinct chemical groups are combined, they cannot be classed with the free elements. Such are the combinations of Arsenic, Antimony, and Bismuth with metals of other groups, and they (the Arsenides, Antimonides, &c.) accordingly take their places as the first section of Division II. and will be found arranged in the latter half of Case 4.

Section ii. Next in order to these are placed, as a second section of Division II., the compounds of metals with the "thionid elements;" and accordingly the Tellurides, Selenides, and Sulphides are displayed in Cases 5 to 9 inclusive.

Case 5 (i.) These are succeeded by a third section of this division, namely, by Minerals to form which compounds belonging to each of the former sections are combined together.

These three sections may be severally represented by their prominent members, the arsenides, the sulphides, and the arseno-sulphides.

Case 7 (i.) The first of these sections comprises the cuprous Arsenides, such as Domeykite, the tricuprous arsenide; also, the antimonide of Silver or Discrasite, diargentous antimonide. Besides these there are included in this section several compounds of Iron, Cobalt, and Nickel. Nickeline, called also "Copper Nickel," from its colour, is a

Cases 5 & 6. rhombohedral mineral, the nickelous monarsenide. Rammelsbergite

Case 8 (i.) is the nickelous diarsenide and Smaltine, or "tin-white Cobalt," the cobaltous diarsenide, Safflorite being a variety of this last, containing Iron in place of a part of its Cobalt. These minerals are cubic in form, but some of the same substances which constitute them are also found in prismatic forms, affording examples of dimorphism. Thus the nickelous diarsenide, when thus occurring in crystals of the prismatic system, is the mineral Chloanthite, and Leucopyrite is a ferrous diarsenide.

In this section is also included the cobaltous triarsenide, Skutterudite.

The second section includes the various compounds of Sulphur, Selenium, or Tellurium—the Thionid elements—with the metals. Silver, a monad element, and Copper, a metal that in one group of its salts plays the part of a monad element, contribute to form a small group in this section of the type  $M_2\Sigma$ . Thus Petzite is the Silver (diargentous) telluride, Naumannite the corresponding selenide of Silver, while Argentite is the sulphide of Silver. These are cubic in crystallization, but the sulphide of Silver is a dimorphous mineral presenting itself as Acanthite in forms belonging to the prismatic system. To this system belongs also Redruthite, a valuable ore of Copper, the "cuprous" (or dicupric) sulphide. Among the other important minerals in this section, a cubic series of mono-sulphides occurs which includes two commercially very important ores—Galena, the sulphide of Lead, and Blende, the sulphide of Zinc.

Section i.

Case 4 (ii.)

A Rhombohedral series includes Covelline, the cupric (monocupric)



sulphide, Cinnabar, or mercuric sulphide, the unique source of the important metal Mercury. Millerite, the nickelous monosulphide, and Greenockite, a rare mineral in fine little yellow crystals, consists of the corresponding sulphide of Cadmium. Case 7.

There is also an important series of disulphides wherein Hauerite and Iron-pyrites, formed severally of the manganic and the ferric di-sulphide, are cubic, while as Marcasite the latter compound is prismatic in crystallization. These two forms of the ferric disulphide are frequent and familiar minerals, Iron-pyrites being conspicuous for its sharply defined forms, and Marcasite, or "White Iron-pyrites," for fantastic groupings in its crystallization that have obtained for it the various names of Spear pyrites, Cockscomb pyrites, &c. Case 8.

Molybdenite ( $\text{MoS}_2$ ) and Realgar ( $\text{As}_2\text{S}_2$ ) are severally molybdous and arsenic disulphides; the former a rhombohedral, the latter an oblique mineral. Case 9.

Among the trisulphides we find some important compounds of the triad elements crystallizing in the prismatic system. They are Orpiment, or arsenic trisulphide ( $\text{As}_2\text{S}_3$ ), and the two isomorphous trisulphides of Bismuth and Antimony, Bismuthite ( $\text{Bi}_2\text{S}_3$ ) and Antimonite ( $\text{Sb}_2\text{S}_3$ ). Of both the last minerals, and in particular of Antimonite, very fine specimens are in this Table Case. Antimonite is an important source of the metal Antimony. Case 9.

The third section of the division is composed of minerals wherein certain arsenides, &c., of Section i. are combined with sulphides of Section ii., or which may be looked on as the result of a displacement of half the Arsenic of the minerals in the former section, by its equivalent of Sulphur. Of these there is a cubic series, including Cobaltine, or Cobalt-glance, the "Silver White Cobalt" of early mineralogists, an arseno-sulphide of Cobalt,  $\text{CoAsS}$ ; or  $\text{CoAs}_2$ ;  $\text{CoS}_2$ . In Gersdorffite, or Nickel-glance, and Ullmannite or Antimonial Nickel-glance, half the sulphur in a nickelous disulphide is displaced by Arsenic and by Antimony respectively. Section iii.

In this section, also, the minerals of this chemical type exhibit a dimorphism similar to that of Pyrites and Marcasite among the disulphides of Section ii., and of Rammelsbergite and Chloanthite among the diarsenides of Section i.; for in Mispickel and Glauco-dote we find arseno-sulphides of Cobalt and Iron of the same chemical type as Cobalt-glance, but crystallized in the prismatic system. Thus the three homotypic series of cubic diarsenides, disulphides, and diarseno-sulphides belonging to the three sections of this division might be treated as a single group, while the three corresponding trimetric series may be looked on as another such group. Case 10.

Besides the three sections already described, this division contains a fourth, wherein metallic sulphides are so combined with sulphides of Arsenic, Tin, Iron, &c., as to produce a series of sulphur salts; in the constitution of which Sulphur plays the part which Oxygen plays in the ordinary oxygen-salts. This section is a numerous one in point of species, and the following are a few minerals included in it that are especially worthy of note. Section iv.  
Cases 10, 11, 12.

In one—and that a somewhat ambiguous—class of these Salts, Iron, either as a ferric sulphide ( $\text{Fe}_2\text{S}_3$ ) or as ferrous bisulphide ( $\text{FeS}_2$ ), would seem to enter as a constituent of the “acid” ingredient. In this class we meet with two important copper ores, the largely worked Chalco-pyrites or Copper-pyrites, and Bornite or Purple Copper-ore. Of both these minerals, there are crystallized specimens from Cornwall; and massive pieces from Tuscany are seen in the front of Case 7.

The rare mineral, Sternbergite, consisting of Iron, Sulphur, and Silver, belongs also to this class; while Linnæite, or “Cobalt-pyrites,” is a sulphur-compound of Cobalt, exactly analogous to the oxygen-compounds termed the “magnetic oxides” of Iron or Manganese, ( $\text{Co}_3\text{S}_4$ , cobaltous epitrisulphide).

Tin-pyrites is a bibasic sulphostannate of Copper, containing Iron and Zinc, and is a salt of the stannic sulphide  $\text{SnS}_2$ , (sulphostannic acid).

The largest class of the sulphur salts is that consisting of sulpharsenites, sulpho-bismuthites, and sulph-antimonites. Among these Tetrahedrite (Fahlore or Grey Copper), is noticeable as a most important ore of Copper. It is a sulph-antimonite of that metal, in which cuprous sulphide is frequently displaced by small amounts of argentic sulphide, and is also associated with sulphides of Iron and Zinc. In some of its varieties, as in Tennantite, the trisulphide of Antimony is entirely, and in others partially, displaced by an equivalent trisulphide of Arsenic. The argentiferous Tetrahedrite is a valuable ore of Silver. The specimens of Bournonite, a tri-basic sulph-antimonite of Copper and Lead, recently raised in Cornwall, are the finest that have been found; and those from the Hartz, and from Traversella, are not unworthy of juxtaposition with them. The so-called Red Silvers, a group of isomorphous rhombohedral minerals, are the tri-basic sulphantimonite and sulpharsenite of Silver, Pyrargyrite and Proustite; sometimes in a comparatively isolated state, but more frequently blended together in various proportions. Beautiful as well for their forms as for their blood-red colours, that are deeper in intensity according as the antimony preponderates over arsenic, they constitute one of the more precious of the ores of Silver. The specimens of Pyrargyrite and Proustite exhibited in Case 12, and in particular those of the latter mineral from Chili, are extremely fine.

Among the rarer minerals, attention may be called to the fine specimens of Frieslebenite, a mineral which is abundant enough to become an ore at Huendelencina, in Spain; also to Fireblende and Xanthocone, the latter containing a sulpharseniate of Silver, combined with the tri-basic sulpharsenite of that metal.

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### DIV. III. COMPOUNDS OF THE HALOGEN ELEMENTS.

This next principal division of the Collection is also subdivided into the simpler compounds, and a more complex section of Salts. Among the former will rank Calomel, Salammoniac, Common Salt, and the

chloride, iodide and bromide of Silver, with the mixtures of these, *inter se*. These last are kept secluded from the light, but the crystal forms and colour suite of Fluor spar exhibited in Case 14, form a series as remarkable for beauty as any in the Collection. The Salts in this division are represented by certain double fluorides, of which the most important is the Greenland mineral Cryolite. It is a fluo-aluminate of Sodium. Case 13.  
Case 14.

#### DIV. IV. COMPOUNDS OF OXYGEN.

The remaining division consists of Minerals of which *Oxygen is a constituent ingredient*, a class necessarily large on a planet with an atmosphere consisting in considerable proportion of this chemically energetic element. The rocks which constitute the earth's crust, are aggregates of minerals falling under this chemical division. Here, as in the previous divisions, we distinguish the more simple kinds of combination from the more complex; and though such a distinction as is expressed by a section of oxides and a section of salts is a difficult one to define with logical precision, it yet serves the object sought in a system of classification, by bringing together compounds that most closely resemble each other, the different classes falling into a natural sequence, nearly in the order of the simplicity of their chemical formulæ. Cases 15 to 60.

The first section of this chemical division, the Oxides, will be found arranged in Cases 15 to 26, those containing the greater proportion of equivalents of oxygen following after those that contain fewer. Commencing with basic types of oxides, we pass through those of comparatively neutral oxides (among which we must look for those members of the section which possess the most equivocal claim to a place in this section); and from these we attain to the higher oxides which act the part of acids. The oxides include several very important minerals. First in order among them is Cuprite, the red oxide of Copper, cuprous oxide. It occurs in ruby-coloured and transparent crystals of the cubic system. These are seen in the first half of Case 15, and with them are the "Tile ore," from Siberia, and the bright-red fur-like deposits of Chalcotrichite. Section i.  
Case 15. The cupric oxide, as Melanconite and Tenorite, succeeds to the crystalline oxides of Magnesium (Periclase), and of Zinc (red oxide of Zinc, or Spartalite), in the other half of this Case. These are followed, first by the hydrated monoxides, including Brucite, the hydrate of Magnesium, which presents delicate hexagonal transparent crystals; in succession to which are minerals in which oxides of this type are associated with compounds belonging to preceding Divisions of the Collection. With the rare and almost exclusively British oxychlorides of Lead, Matlockite and Mendipite, and with Atacamite, a hydrate, combined with chloride of Copper, is also arranged the unique specimen of Percyite, a beautiful mineral of unknown locality, associated with Gold. It is a hydrated combination of the oxychlorides of Lead and Copper.

The next class in the section of oxides is composed of minerals of a chemical type, similar to that of the magnetic oxide of Iron (the



ferrous-ferric oxide), which may in fact be viewed as a combination of ferrous oxide with ferric oxide, and thus, while possessing as an epitritoxide the formula and a place in the section of the oxides, has claims to be recognized as a salt.

Case 16.  
(ii.)

The group of cubic-formed minerals to which Magnetite more especially belongs, the "Spinel Group," includes Franklinite and Chromite (Chromic-iron), which latter mineral is the source of the chrome yellow and of some other colouring matters employed in the arts. The Spinel, properly so called, also belong to it. These are aluminates of Magnesium, also of Zinc, Iron, and Manganese: ferric oxide, too, occasionally plays the part of alumina. The deep-red "Spinel Ruby" and the pale rose-tinted "Balas Ruby" are beautiful gems cut from specimens of this Mineral, of which a good assortment of crystals is exhibited. Pleonast, Gahnite, Dysluite, are opaque varieties of Spinel. To this class also may be referred the Chrysoberyl, a combination of glucina and alumina (aluminate of Glucinum), homotypic with epitritoxides. It is prismatic in crystallization, and as a gem, known by the name of "oriental chrysolite," it presents itself as a beautiful greenish yellow stone, almost equal in lustre and in hardness to the Sapphire. It also has the name Cymophane, from a cloudy appearance that presents itself in two of the planes of the crystal, and is retained even when the transparent stone is cut and polished. Cut *en cabochon*, the less transparent specimens furnish one of the kinds of stone to which the jewellers give the name of Cat's-eye. The dark green variety from the emerald mines of the Ural exhibits trichroism, absorbing the different colours in different amounts according to the crystallographic direction the light pursues on entering the crystal. Of this variety, termed Alexandrite, very fine specimens are seen in this Case.

Case 17.

The next class among the oxides is that of the epidetoxides (the so-called "sesquioxides"). The pure oxide of Aluminium is seen in colourless crystals of Corundum, consisting for the most part of hexagonal pyramids and prisms. With minute traces of colouring ingredients, these crystals assume rich hues, and become gems conspicuous for their extensive colour-suite, and ranking next in value, as in lustre and hardness, to the diamond. These are the colourless Lux Sapphire, the (azure) Sapphire, the Ruby, the 'Oriental-Topaz,' 'Oriental-Amethyst,' 'Oriental-Emerald,' &c.; gems not to be confounded with those from which they borrow their names, while distinguished from these by their title "Oriental," in allusion to the Eastern lands, of India, Ceylon, Siam, Pegu, &c., which from the earliest times have produced the gem forms of this mineral in their greatest perfection. In the "Star-stones" a six-rayed star is seen to play, its position being symmetrical in respect to the axis of the crystal; and through the less pure varieties of Corundum, we descend to the opaque and granular, massive, but still, from their hardness, valuable states of this Mineral, of which Emery is an impure form. Identical in chemical and crystallographic type with Corundum, though very different in aspect both in its crystalline and massive varieties, is the valuable iron ore, Hematite,

Cases 17  
and 18.

the ferric oxide. A tarnish on some of its crystals, especially on those from Elba, produces an iridescent effect of great beauty. With Hæmatite is placed Ilmenite, or Titanic-iron, one of the ambiguous species of this class. Intimately blended with the former mineral in all proportions and crystallizing in its forms, it yet presents the formula of titanate of Iron, a formula, however, which, as containing two equivalents of metal united to three of oxygen, is in fact homotypic with an epideutoxide (sesquioxide). The hydrates of this class include Limonite (Brown-hæmatite), and Goethite, which is monohydrated ferric oxide. The Cornish specimens of this mineral, from the Res-tormel mine, are very fine. In juxtaposition with Goethite are Mang-anite and Diaspore, respectively the monohydrated manganic and aluminic oxides, isomorphous with Goethite. Cases 18 (ii.) and 19.

The class of dioxides is illustrated by a series of crystals and other forms,—especially rich in the Cornish varieties—of Cassiterite or Tin-stone (Stannic acid), *the ore of tin*. Case 20.

In the same Case is placed the Zircon, consisting of the associated dioxides of Zirconium and of silicon (zirconic and silicic acids). Its crystals, like those of Cassiterite, with which it is nearly isomorphous, are pyramidal. Its pellucid varieties are gems. The dull green is the Jargoon; while peculiar (“hyacinthine”) red tints characterize the gem known as the Hyacinth or Jacynth. The yellow and blue tints are rare, but the more pellucid and colourless zircon, from its exceptionally high refractive power, approaches even the diamond in brilliancy.

In the same continuous series is Rutile, the dioxide of Titanium (titanic acid), isomorphous with Zircon, and approximately so with Cassiterite. Anatase is the same substance, also in pyramidal forms, but with different parameters; while in yet a third series of forms this trimorphous titanic dioxide is to be seen as the prismatic mineral Brookite, of which the specimens from the Snowdon district are very remarkable. Case 21.

In this Case is also exhibited the dioxide (the “peroxide”) of manganese, Pyrolusite, the mineral employed for the production of oxygen gas, and for the evolution from the chlorides of their chlorine, so largely employed in the arts.

The Rhombohedral system is represented in the class of the binoxides by Quartz and its varieties.

This important mineral is silica, the binoxide of Silicon (a chemical element of the carbon group). This oxide occurs in a state chemically and physically distinct from Quartz, in the Opal, which is amorphous, and will be found at the end of the crystalline series of the binoxides. Among its purer varieties are the Mexican Fire Opal, and the beautiful and almost exclusively Hungarian gem, the Noble Opal, conspicuous for its fascinating play of colours. The other allotropic state of silica is seen in its purest form in Quartz crystal. Cases 24 (ii.) and 25 (i.)  
Case 21  
 Its tinted specimens may vie in point of colour with jewels (ii.) of denser substance and higher refrangibility. Among these are the lilac-hued specimens of the Amethyst, of which as well as of the yellow Brazilian kind, there are specimens showing the “rippled” Case 22.

fracture which distinguishes them from the ordinary Quartz, with its smooth conchoidal fracture. They are further distinguished by peculiar optical properties.

Cases 22 to 25. A series of minerals succeeds, formed by mixtures of the crystalline with the opaline silica, and of these with iron oxides and argillaceous and other impurities. They include the various kinds of Jasper and of Calcedony, Prase, Bloodstone, and Heliotrope, Hornstone, Carnelian, Sard, Plasma, while the various banded, ribbed, eyed, spotted, clouded, and other fantastically figured and coloured stones of the Agate kind, including Onyx and Sardonyx, in every gradation of translucency, illustrate the modes in which these mixed minerals occur, and often evidence the successive action of the processes that formed them. Of the pseudomorphism of minerals, a good example is furnished in Case 24 (i.) Haytorite, a mineral composed of a Chalcedonic Hornstone, but presenting the forms of Datholite (see Case 51).

Section ii. We next enter on the section of Oxygen Salts, the first class under Cases 27 to 35. which is occupied by the Carbonates. The isomorphous character of the several salts of the metals Calcium, Barium, Strontium, Lead, and Magnesium, and of the corresponding ferrous and manganous salts with them, finds illustrations in the long array of the anhydrous carbonates which are here exhibited, crystallized severally in forms which are equivalent; or united in various proportions of admixture in the same crystal.

These carbonates are divided by their crystalline forms into two large series or groups. The first comprises those crystallizing in prismatic forms on the type of Aragonite, the prismatic calcic carbonate. Among these are, besides Aragonite, Witherite, the barium carbonate, Strontianite, the strontium carbonate, and Cerussite, the plumbic carbonate. The specimens of this last mineral and those of Witherite are especially noticeable.

The second series comprises those minerals of this chemical type that crystallize in rhombohedral forms isomorphously with Calcite, the rhombohedral calcic carbonate. These include the carbonate of Magnesium, Magnesite; of Zinc, Calamine; and the ferrous and manganous salts termed Chalybite and Diallogite respectively. They include also the mixtures of these in a very considerable variety, such as Dolomite, Ankerite, Brown Spar, &c. Baryto-calcite crystallizes in forms of the oblique system, and establishes the trimorphism of these minerals by exhibiting the barytic and calcic carbonates crystallized in a third set of distinct crystalline forms. The crystals of Calcite in Cases 29 to 31, and in the fronts of Cases 27 to 29, are a very fine series, as well for their varied forms as for the conspicuous illustrations certain of them afford of the highly double-refracting property of the crystal. Some singular pseudomorphs from Devon, in the Chalybite Case, are well worthy of notice.

Cases 27  
and 29.

The Limestone and Dolomite rocks are formed of Minerals from this series, in various massive, granular, or crystalline aggregations, the latter of which frequently form Marbles; while into the Clay-ironstone, with which the blast furnaces of Wales and Scotland are largely fed, spathose-iron, or Chalybite, enters as an ingredient in a high percentage.



Among the hydrated carbonates, and carbonates combined with hydrates, or with compounds belonging to the previous divisions, attention may be called to the green and blue copper ores, Malachite and Chessylite, of which latter a very fine series of crystals is exhibited. Case 34(ii).

Case 35 contains also fine specimens of Phosgenite, the combination of the chloride and carbonate of lead and of Parisite, an analogous compound from the Emerald Mines of Santa Fè di Bogotà, containing the fluoride combined with the carbonate of the rare metals of the Cerium group. Case 35 (i.)

The Silicates, occupying no less than fifteen Cases, form the next class in this section. The minerals comprised in this large, varied, and important class are arranged in series distinguished by the type of oxide that characterizes the bases in the silicate. Thus the silicates corresponding to monoxide-bases (ferrous oxide, magnesia, &c.) are arrayed in one series; those the bases of which are epideutoxides (sesqui-oxides) are in another; and such as contain bases of both kinds fall into a third. The respective hydrates are comprised under the series to which the minerals of corresponding anhydrous types belong.

The first of these series is composed of such silicates as are formed by silicic acid in association with monoxides only, or in which epideut-oxides ("sesqui-oxides") are met with only as accidental or intrusive ingredients. The anhydrous section of this series contains, among others, the following minerals. Phenakite, the di-glucinous silicate, and Willemite, a corresponding and isomorphous silicate of Zinc, represent a rhombohedral series of dibasic silicates. The specimens of Phenakite from the emerald mines of the Urals are extremely fine. Of the same chemical type are the minerals comprised in the Olivine group, which are prismatic in their forms and include Tephroite, di-manganous silicate; Fayalite, di-ferrous silicate; with Olivine and Hyalosiderite, which are the magnesian and magnesio-ferrous silicates of the series. Case 36 (i.) The Chrysolite is the name of the pale yellow gem into which the larger and clearer specimens of Olivine are occasionally cut; while the Peridot is a pistachio-green variety, of which fine crystals and cut specimens are exhibited in Case 36. Gadolinite is di-yttrious silicate (containing also cerium, &c.); and Humite, a mineral containing Fluorine, belongs also to the more basic silicates.

Among the mono-silicates are arranged the large series of important minerals which form the two parallel groups of the Augites and the Hornblendes. In juxtaposition with these is seen Wollastonite, the calcic monosilicate, and the anorthic minerals Rhodonite and Babingtonite, homotypic in composition, but crystallographically differing from the other members of the series. The Augitic and Hornblendic groups present two distinct crystallographic types. In Enstatite, the magnesian silicate crystallizes in the prismatic system, though with certain of the angles of an Augite; while in the obliquely-crystallizing Diopside, and the other Augites, part of the magnesium is displaced by Iron, Manganese, Calcium, or Zinc. So Anthophyllite, a magnesio-ferrous monosilicate, presents prismatic forms with angles belonging to the type of the Hornblendes, as exemplified in Tremolite and the other members of the group, which, however, crystallize in Case 36 (ii.) Case 38 (ii.) Case 38 (i.)

Case 38(ii.) the oblique system. Certain varieties of Jade or Nephrite are assigned to these groups, as are also different kinds of Asbestos.

Cases 39 and 40. The hydrated section of this series contains the Serpentine and the talcose minerals. It comprises, also, Dioptase and Chrysocolla,

Case 40(ii.) silicates of Copper; Smithsonite, the silicate of Zinc; and Apophyllite, a hydrated calcio-potassic silicate, extraordinarily fine specimens of

Case 39 (i.) which are seen in Case 39, and in the glazed fronts of Cases 11 and 12.

The second series in this class contains the silicates of the epideutoxides (sesqui-oxides). Foremost among them is the Topaz, a silicate of Aluminium, in which part of the silicate is displaced by an

Case 41 (i.) analogous fluosilicate. The specimens of this mineral from the Ourulga river in Siberia, collected by Col. de Kokscharow, are singularly fine. They are of a delicate sherry-colour, but are preserved in the dark, as otherwise the light would speedily bleach them.

The third series of the silicates is constituted of those in which the monoxides and epideutoxides are associated in the same mineral.

The various groups known by the general names of the Garnets, Idocrase, Epidote, the Felspars, the Micas, and Dichroite with a variety of minerals resulting from its alteration, find their places in this series, into the hydrated section of which fall the beautiful and extensive varieties of Zeolites and Chlorites.

Case 42. The Garnet group, a series of minerals in which the type alone is constant, while the isomorphous metals it contains replace each other in unlimited variety, is the first important mineral in the third series. To it belong the violet-tinted Almandine, the yellow and hyacinthine Garnets known as Cinnamon-stone and Essonite, the rich blood-red Syriam Garnet, the Bohemian Garnet and Pyrope, varieties which, when cut *en cabochon*, or with a concavo-convex or only a convex form, are the Carbuncle of jewellery. Idocrase, a mineral with a smaller range of chemical variation than the Garnet, is represented by a series of crystals (of pyramidal forms) of remarkable variety and perfection. Epidote is also well represented. The group of Felspars follows, among which

Case 42. will be found Labradorite, with its beautiful play of colours; the Moonstone, a partially decomposed Orthoclase; and a fine specimen of the Orthoclase called "Valencianite" from Mexico. Dichroite (the

Case 43 (ii.) Sapphire d'Eau of jewellers), exhibits an intense blue when looked through in one direction, and pale yellow-brown colours when the light

Case 46 (i.) traverses the crystal in other directions. The Beryl includes the Emerald and also the Aquamarine of the jewellers, and with Euclase occupies half of Case 46. It is a silicate of Aluminium and Glucinum, the Aluminium being in the Emerald apparently displaced to a minute amount by Chromium. Euclase is a mineral composed of the same elements, and containing a small quantity of water; the specimens of it from Siberia are of high interest.

Case 50. The silicates proper are succeeded, in Case 50, by minerals in which silicates are associated with boric-oxide or borates. Among these the Tourmalines present a rich assortment of valuable and beautiful specimens, conspicuous for crystals of Rubellite, from Siberia and Ava. These are succeeded, in Case 51, by a class of minerals of great mineralogical interest, containing some of the rarest of the elements,

and themselves of rarity; much uncertainty, however, still attaches to the chemical formulæ of several of these species. The titanates, Case 51. the tantalates, and niobates, and these combined with silicates, zirconates, and stannates, thus link the silicates to the molybdates Case 52. and tungstates, and these, in turn, are followed by the class of chromates and vanadates, and the sulphates. The suite of specimens Cases 51 of Perovskite from Siberia, the crystals of Eudyalite, of Columbite, of and 52. Fergusonite, and of Pyrrhite, and the specimens of Tscheffkinite, are especially observable for their excellence or their rarity. Among the anhydrous species in the sulphates, attention may be called to the specimens Cases 53 to 55. of Celestine (sulphate of Strontium) from near Bristol, and to the Anglesite (sulphate of Lead) from Pennsylvania and from Monte Ponì. Gypsum, or Selenite, the hydrated sulphate of Calcium, is an important mineral as yielding Plaster of Paris by the expulsion of its water. A magnificent specimen of this mineral, as remarkable for its size as for the grouping of its crystals, presented by His Royal Highness the late Prince Consort, ornaments a window in Room II. It was found at Reinhard's-brunn, Saxe-Coburg.

Adjoining these are a few minerals of the greatest rarity and interest. Cases 56 The crystals of Linarite are unique, and the specimens of Calcedonite and Lanarkite, of the sulphato-tricarbonate of lead, Leadhillite, and of the rare mineral Connellite, are among the finest known of these British species. Cases 56 and 57.

The borates and the class of nitrates occupy part of Case 56; and thence to Case 60, the Cases are occupied by the class which includes the phosphates and arseniates, in which the isomorphism of the corresponding compounds of the arsenoid element Phosphorus, and of Arsenic, is so complete that the salts of their acids cannot be well classified apart from each other. Cases 56 to 60.

Here may be seen fine crystals of Erythrine, the beautiful arseniate of Cobalt; specimens of Haidingerite (Case 57), and of Erinite (Case 57); crystals of Lazulite (Case 58); the suites of Uranophyllite (phosphate of Copper and Uranium), and of Autunite; the beautiful blue Cornish Mineral Liroconite; and splendid specimens of Apatite, Case 60. Mimetesite, and Pyromorphite.

As an Appendix to the Collection, two Half Table Cases in Room I., contain certain organic compounds, which as occurring in the earth with constant and definite characters, independent of organic structure, find their place in a Mineral Collection. Among these, Amber, in ancient times ranking in value with the gems, is here exhibited in a large series of specimens.

In Room II. will be seen two Half Table Cases adjoining the wall, in which is arranged an extensive and instructive series of pseudomorphous minerals. They illustrate the decomposing influences to which many minerals have been subjected, and they throw valuable light on the order of succession in which, and the conditions under which, particular minerals have been formed and deposited.

NEVIL STORY-MASKELYNE.



## DEPARTMENT OF BOTANY.

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THE Botanical Exhibition comprises specimens of woods and other vegetable structures, unsuited to the Herbarium, and capable of being advantageously exhibited. Entering the

### FIRST ROOM

through the Eastern doorway, *the Wall of the Eastern End* is seen to be occupied by numerous specimens of FERN-TREES, among which the following merit particular notice:—

A trunk of *ALSOPHILA BRUNONIANA*, *Wall.*, forty-five feet in height, from the mountains of Sylhet; two trunks of *ALSOPHILA CONTAMINANS*, *Wall.*, from the Philippine Islands, with a section of the same from New Guinea; two lofty stems of the great New Zealand Fern-tree, *CYATHEA DEALBATA*, *Swartz*; and another fine species from New Zealand, *CYATHEA MEDULLARIS*, *Swartz*; the Tree-fern of the Cape of Good Hope, *HEMITELIA CAPENSIS*, *R. Br.*; and several specimens of *DICKSONIA ANTARCTICA*, *Labill.*, one of which is remarkable in addition for the bifurcation of its stem, another for the curious induration of its central pith, and a third (presented by the Tasmanian Commissioners to the Exhibition of 1862) for its great size.

The numbering of the WALL CASES commences at the Eastern end of the Northern side of the Room, and their contents are arranged in the following order:—

Case 1 contains specimens of remarkable CRYPTOGAMIC structures, chiefly FERNS, but including also a few ALGÆ and FUNGI.

The ALGÆ, or SEA-WEEDS, are represented by the Magellanic genera *LESSONIA* and *D'URVILLEA*, and by *LAMINARIA BUCCINALIS*, *Lamour.*, from the Cape of Good Hope, three of the most remarkable of Fucoid forms.

The few FUNGI exhibited belong to the subdivision of the genus *BOLETUS* named *POLYPORUS*, and are chiefly remarkable on account of the large size of the specimens.

At the back of Case 1 are placed specimens of the fronds of *ALSOPHILA PRuinATA*, *Kaulf.*, from Chili, and *THYRSOPTERIS ELEGANS*, *Kunze*, from the island of Juan Fernandez. On the floor of the Case is a specimen of *PLATYCERIUM ALCICORNE*, *Desv.*; and beside this are placed several bases and sections of the large trunks occupying the end

wall of the room, together with specimens of some smaller Ferns, having a structure in some respects analogous to that of Fern-trees, such as the genus *LOMARIA*. Other small Fern-trees, but differing still more widely in structure, including species of *ASPIDIUM*, *NEPHRODIUM*, and *DIPLAZIUM*, are placed upon the shelves. Of the former genus there are sections of the stems of several British species.

Cases 2 to 6 are filled with specimens of *PALMS*, including portions of stems and their sections, fronds, spathæ and spadices, and fruits.

Case 2 is chiefly devoted to Professor Von Martius's tribe of *ARECINÆ*. Among the specimens of this tribe may be specially noticed *CARYOTA URENS*, *Linn.*, from which the natives of India obtain large quantities of palm-wine, and sago of very good quality. At the back is a fine specimen of the inflorescence of *CENOCARPUS BACABA*, *Mart.*, with its canoe-like spatha, together with its wood and a frond. In the case are also specimens of several species of *ARECA*, or *BETEL-PALM*; and of *ARENGA SACCHARIFERA*, *Labill.*, one of the most valuable Palms of the East, producing, in addition to timber and thatch, an abundance of palm-wine, sugar, sago, and a fibre of great tenacity and durability, much employed in India, and in the Malayan Islands, where it is called *Ejoo*, in the construction of cables and other cordage.

Cases 3 and 4 contain specimens of the tribe *CALAMINÆ*, or *SCALY-FRUITED PALMS*. Among those exhibited in Case 3 are several specimens of the graceful inflorescence of *PLECTOCOMIA ELONGATA*, *Mart.*; two species of *ZALACCA*, *Z. CONFERTA*, *Griff.*, and *Z. AFFINIS*, both from Malacca; *EUGEISSONA TRISTE*, *Griff.* (*PHOLIDIA*, *Linn. fil. Ms.*), one of the most remarkable genera of the tribe; and several species of the genus *CALAMUS*, which furnishes the most valuable walking and other canes, and is also remarkable for the slender, elongated climbing stems of many of its species, and for the thorns or prickles of various shapes which frequently cover their stems and fronds.

At the back of Case 4 are placed fine specimens of the male inflorescence, together with fruits of the *SAGO-PALM* (*METROXYLON RUMPHII*, *Mart.*), and also of the inflorescence, both male and female, the latter bearing fruits, of the Brazilian *MAURITIA ACULEATA*, *Humb.* Large fruit-bearing specimens of *RAPHIA VINIFERA*, *Beauv.*, and of *RAPHIA RUFFIA*, *Mart.*, occupy the floor and sides of the Case. As the name imports, the natives of Western Africa obtain from the former a considerable supply of palm-wine.

Case 5 contains specimens of Palms of the tribes *BORASSINÆ*, *CORYPHINÆ*, and *PHŒNICINÆ*. At the back is a fine section of the base of the stem of the *Tal*, or *Palmeira-Palm*, *BORASSUS FLABELLIFORMIS*, *Linn.* On the floor are several nuts of the *LODOICEA SEYCHELLARUM*, *Labill.*, commonly called *Double*, or *Sea Cocoa-Nuts*. These are contained, one, two, or more generally three, in an immense fibrous fruit, attaining a size of three feet in circumference, and weighing from thirty to fifty pounds; and are subject to considerable variations in size and form. On the left side are specimens of the inflorescence, with its curious spatha, of *MANICARIA SACCIFERA*, *Gartn.*, from Brazil

and Guiana; one of these displays several fruits, which in Guiana bear the name of *Tourlourou*. Of *CORYPHA UMBRACULIFERA*, the *Talipot-Palm* of Ceylon, a large frond is displayed over the top of the Case. Within it, at the back and side, are specimens of various species of *LICUALA* and *LIVISTONA*; and fronds of *COPERNICIA CERIFERA*, *Mart.*, the *Wax-Palm* of Brazil, trunks of which are placed against the western wall of the room. There are also specimens of *SABAL ADANSONII*, *Guers.*, and of several species of *CHAMEROPS*, as well as of several species of *PHENIX*, or *Date-Palm*, including *PHENIX SYLVESTRIS*, *Roxb.*, which is known in Bengal by the name of *Khuj-joor*, and produces large quantities of palm-wine and date-sugar.

Case 6 is occupied by specimens of the tribe *COCOINÆ*, *R. Br.* Of the *Cocoa-Nut* itself, *COCOS NUCIFERA*, *L.*, may be noticed a section of the stem; a large bunch of fruits still attached to the inflorescence; some separate fruits; a large bottle, forming part of Sir Hans Sloane's Collection, and containing both male and female inflorescence; and some smaller bottles, one containing germinating nuts in various stages of advancement. At the back of the Case is a fruit-bearing inflorescence, together with an unopened spatha and a frond, of *COCOS CORONATA*, *Mart.*, from Brazil, the fruits of which are scarcely more than an inch in length. By the side of these is a fine specimen of the fruit-bearing spadix of *MAXIMILIANA REGIA*, *Mart.*, inclosed in its singular boat-shaped spatha. Below are numerous male and female spadices, the latter bearing fruit, of the *Oil-Palm* of Western Africa, *ELÆIS GUINEENSIS*, *L.*, so important for the supply of palm-oil.

Case 7 is chiefly occupied by *PANDANÆ*, and miscellaneous specimens of *PALMS*, together with a few other *MONOCOTYLEDONOUS* structures. Among *PANDANÆ*, the most remarkable objects are: — A branched trunk of *PANDANUS ODORATISSIMUS*, *Linn. fil.*; a stem of *FREYCINETIA BAUERIANA*, *Endl.*; and fruits of several species of *Pandanus*, in which the various modes of aggregation in the different species are particularly deserving of notice. On one of the shelves of this Case is a fine specimen of the entire fruit of *PHYTELEPHAS MACROCARPA*, *Ruiz and Pav.*, which produces the *IVORY NUT* of commerce, universally known for the number of small ornaments manufactured from it under the name of *vegetable ivory*. Below are sections of several *PALM-WOODS*, such as the *DATE-PALM*, *PHENIX DACTYLIFERA*, *Linn.*; the *DOUM-PALM* of Upper Egypt, *HYPHENE THEBAICA*, *Gertn.*, remarkable among Palms for its branching stem; and *ARENGA SACCHARIFERA*, *Labill.* (*SAGUERUS RUMPHII*, *Roxb.*), the section of which exhibits the curious structure and arrangement of its roots as they proceed from the lower part of the stem; and on the sides of the Case and on the lower shelf are placed some fine specimens of the trunk (with sections) of *DRACÆNA DRACO*, *Linn.*, from Madeira, one of the sources of the pigment known as "Dragon's blood," and stems of the New Holland and of the New Zealand species of *CORDYLINA*.

Case 8 is appropriated to *MONOCOTYLEDONOUS* specimens of various



orders. On the floor of this Case are two specimens of longitudinal sections of the trunk of *XANTHORRHEA ARBOREA*, *R. Br.*, one of them branched, and a portion of the trunk of another species of *XANTHORRHEA*, from Western Australia. Of the latter there is a transverse section on one of the shelves, on which are also a longitudinal section of another species, loaded with its resinous secretion, a corona of leaf-bases similarly loaded, and a circular mass stripped from the stem, and consisting almost entirely of the resin. Of one of the species there is a very fine spike. At the back of the Case is a longitudinal section of the so-called GRASS-TREE of Western Australia, *KINGIA AUSTRALIS*, *R. Br.*; the tops of three other specimens, loaded with heads of flowers; a very young specimen; and another cut longitudinally. On the sides are specimens of six different species of *VELLOZIA*, from Brazil; and at the back are placed specimens of a suffrutescent *ERTOCAULON*, from Brazil; of the great woody rush of South Africa (*PRIONIUM PALMITA*, *E. Meyer*); and of a remarkable species of *DASYPOGON* (*D. HOOKERI*, *Drumm.*), from Western Australia. There are also in this Case specimens of the *LECHUGILLA* of Mexico, a species of *YUCCA*, the root of which is used instead of soap in the washing of dyed woollens, without injury to their colours.

The upper part of Case 9, the last Case on the northern side of the room, is devoted chiefly to *GRAMINEÆ*, or GRASSES, but contains also a few other specimens of Monocotyledonous structures. Above, at the back, and on one of the sides, are placed inflorescences and fruits of the genus *URANIA*. At the back of the Case are also suspended a garment from the coast of Tenasserim, ornamented with the involucres of several species or varieties of *COIX* (commonly called *JOB'S TEARS*), the elongated forms of which are unknown to botanists, except as attached to similar garments; a monstrous variety, brought from China, of a species of *BAMBOO*, in which the lower joints, instead of being long and cylindrical, are short and triangular; and specimens of *ARUNDINARIA SCHOMBURGKII*, *Benn.*, the reed through which small poisoned arrows are blown by the native Indian tribes of Guiana, the smooth and straight joints often reaching a length of sixteen or seventeen feet. On either side are specimens of the light and elegant inflorescence, male and female, of *GYNERIUM SACCHAROIDES*, *Humb.*, a grass of Equinoctial America, and also of the PAMPAS GRASS, grown in England. In front are specimens of the *PAPYRUS REED*, and a remarkable plant of *ZEA MAYS*, grown at Fulham. The floor of the Case is occupied by specimens of the Woods of some remarkable *APETALOUS* trees; such as the great *TREE-NETTLE* of New South Wales (*URTICA GIGAS*, *A. Cunn.*), of which there are two sections, one presenting a very irregular outline, and a diameter at the widest part of nearly four feet; and a section of *PHYTOLACCA DIOICA*, *L.* (the *BELLASOMBRA* of the Spaniards). Both this and the *Tree-Nettle* are remarkable for their rapid growth, loose texture, and the number of their concentric rings. There are also on the floor sections of the Wood and Bark of the *CORK-OAK* (*QUERCUS SUBER*, *L.*), from the Garden of the Company of Apothecaries at Chelsea, and a fine specimen of Cork from the Moun-

tains of Valencia, presented by the Spanish Commissioners to the Exhibition of 1862.

The Western Wall, on either side of the doorway, is chiefly occupied by specimens of PALMS. To the right may be noticed an entire trunk, together with longitudinal sections, of the DATE-PALM (*PHŒNIX DACTYLIFERA*, *L.*) By the side of these are two entire trunks of the WAX-PALM of the Brazils (*COPERNICIA CERIFERA*, *Mart.*), one of them having its upper part rounded and polished, and both displaying the remarkable spiral arrangement of the persistent bases of the fronds, which in one tends upwards to the right, and in the other to the left. A polished longitudinal section of an entire stem, and two other smaller sections, exhibit the internal structure of this beautiful Palm. Next to the doorway on either side is a longitudinal section, one of them polished, of a very tall specimen of *KINGIA AUSTRALIS*, *R. Br.*, and on the left an entire stem, of nearly equal height, with transverse sections in a case attached. Adjoining to this on the left is a fine specimen of an arborescent *VELLOZIA* from the province of Minas Geraes in Brazil, and beyond it a portion of the very thick stem of a species of BAMBOO from Pulo Geun, together with a stem of the COMMON BAMBOO (*BAMBUSA ARUNDINACEA*, *Willd.*), cultivated at Chatsworth, and which attained a height of upwards of forty feet within six weeks after its first appearance above ground. A trunk of the COCOA-NUT (*COCOS NUCIFERA*, *L.*), and a fine longitudinal section of that of the PALMEIRA-PALM (*BORASSUS FLABELLIFORMIS*, *L.*), with a polished cylinder from the upper part of the stem, are also placed at this end of the room.

Returning along the Wall Cases of the southern side, the first Case, numbered 10, contains specimens of *CONIFERÆ* and *CYCADEÆ*. On the back and sides of this Case are suspended some remarkable cones; cross-sections of the Wood of *ARAUCARIA COOKII*, *R. Br.*, from the Isle of Pines, one of which exhibits the mode in which the whorl of branches is given off; a polished knot of *ARAUCARIA EXCELSA*, *R. Br.*, with a section of the same; and a remarkable specimen of Coniferous Wood, forming part of a beam found by Mr. Layard in the ruins of Nimroud, and having the microscopic structure of the YEW (*TAXUS BACATA*, *L.*). On the shelves below are placed cones of the different species of *ARAUCARIA*, *DAMMARA* and *PINUS*: fruit-bearing branches of *WIDDRINGTONIA WALLICHII*, from the Cedarberg, S. Africa; and balls of the leaves of the LARCH (*P. LARIX*, *L.*) felted together by the action of the waves, from the lakes of Cumberland. In the centre, at the back of the Case, is a model of a female flower-bud of *ENCEPHALARTOS CAFFER*, *Lehm.*, and of fruit-bearing scales of the same. On the shelf below are several sections, transverse and longitudinal, of the wood of the same species and of a species of *CYCAS*. At the back above are placed sections of the trunks of *ENCEPHALARTOS ALTENSTEINII* and *ENCEPHALARTOS HORRIDUS*; and on the right-hand side of the Case fronds of *ZAMIA SPIRALIS*, *Salisb.*, from New South Wales.

Case 11 contains, in its lower part, specimens in continuation of the family of *CONIFERÆ*, the most remarkable of which is a section of

a large branch of a Cedar-Tree planted in the Garden of the Society of Apothecaries at Chelsea in the year 1683, and cut down a few years ago, exhibiting 153 concentric annual rings. Above, are numerous specimens of remarkable forms and structures belonging to the family of CACTEÆ.

Case 12 is occupied by MISCELLANEOUS SPECIMENS. At the back above is a leaf, with the under surface exposed, of the great VICTORIA WATER-LILY (*VICTORIA REGIA*, *Lindl.*); and on either side leaves (upper surface) of *NELUMBium LUTEUM*, *Willd.*, and *N. SPECIOSUM*, *Willd.* The shelves present some remarkable cases of the effect produced by incisions through the bark and into the wood of living trees, of which the most striking are supplied by two portions of trunks of the tree furnishing the WINTER'S BARK (*WINTERA AROMATICA*, *Sol.*), from the Straits of Magellan, exhibiting inscriptions made during the voyages of Bougainville (1767) and Cordoba (1786), and cut down by Captain P. P. King, R.N., in the year 1832, in which the number of concentric layers exactly coincides with the number of intervening years. Below are specimens of the Bark, Wood, Foliage, and Fruit of the enormous CONIFEROUS tree of California (*WELLINGTONIA GIGANTEA*, *Lindl.*); a plank of SANDAL-WOOD from the Feejee Islands; a portion of the singularly lobed or channeled trunk, together with a transverse section, of the YARURA, or PADDLE-WOOD, of Guiana (*ASPIDOSPERMA EXCELSUM*, *Benth.*); and portions of the stem, with sections, of the KAVA-PEPPER (*PIPER METHYSTICUM*, *Forst.*), from which the intoxicating drink called Kava is prepared.

In Case 13 are numerous MISCELLANEOUS SPECIMENS, chiefly WOODY CLIMBERS. On one side is a sack made by stripping off the inner bark of a tree of North-Western India (*LEPURANDRA SACCIDORA*, *J. Grah.*); below it a stem of the RICE-PAPER PLANT of the island of Formosa (*ARALIA PAPIRYFERA*, *Hook.*); and on the opposite side are specimens, with portions of the inner bark separated into layers by continued maceration, of the LACE-BARK (*LAGETTA LINTEARIA*, *Juss.*), the lace-like layers of which are occasionally made up into fancy articles of dress of diminutive size. On the shelves are placed some large woody fruits belonging to the tribe of LECYTHIDÆ, including the BRAZIL-NUT of commerce (*BERTHOLLETIA EXCELSA*, *Humb. and Bonpl.*), the MONKEY-POT (*LECYTHIS OLLARIA*, *L.*), and a species of *ESCHWEILERIA*, *Mart.*

Cases 14 and 15 contain a selection of specimens, chiefly FRUITS, preserved in spirit of wine or pyroligneous acid. On the two upper shelves of Case 14 are placed specimens of the class POLYPETALE HYPOGYNE, including fruits of the GAMBOGE-TREE (*CAMBOGIA GUTTA*, *L.*), of the SOUARI-NUT (*PEKEA TUBERCULOSA*, *Aubl.*), of the CAMPHOR-TREE of Sumatra (*DRYOBALANOPS AROMATICA*, *Gartn.*), and of the DURION of the Malays (*DURIO ZIBETHINUS*, *L.*), celebrated alike for its fœtid odour and its delicious taste. There are also on these shelves flowers of the CAMELLIA (*C. ALBA*, *Murr.*), of the HAND-FLOWER of Mexico (*CHEIROSTEMON PLATANOIDES*, *Humb. and Bonpl.*), and of *CAROLINEA INSIGNIS*, *Swartz*, one of the largest of South American flowers. On



the front shelf of the lower range are placed specimens of the class POLYPETALÆ PERIGYNÆ, such as the MANGO (*MANGIFERA INDICA*, *L.*), the CASHEW-NUT (*ANACARDIUM OCCIDENTALE*, *L.*), CLOVES (*CAROY-PHYLLUS AROMATICUS*, *L.*), the JAMBOO or ROSE-APPLE (*EUGENTIA JAMBOS*, *L.*), esteemed one of the finest fruits of Eastern Asia, and CÆLEBOGYNE ILICIFOLIA, *J. Smith*, a plant of New Holland, which has become of singular interest, on account of its continued reproduction in European gardens by means of perfect seeds, produced without any apparent fertilization. On the two hinder shelves are specimens of various families of MONOPETALÆ, such as the ARGAN of Morocco (*ARGANIA SIDEROXYLON*, *R. and S.*), applied by the Moors to many useful purposes, but chiefly remarkable for the quantity of oil derived from its nuts; and the singular tuberous base of the stem of a species of HYDNOPHYTUM, *Jack.*, from the Moluccas, hollowed out (as is usual in these plants) to form a nidus for a colony of ants. The second shelf from the front is occupied by bottles containing flowers and fruits of the classes APETALÆ and GYMNOSPERMÆ. Among the former the most conspicuous are the NUTMEGS (*MYRISTICA*, *L.*), in various stages of development, together with the flowers of CINNAMON (*LAURUS CINNAMOMUM*, *L.*), and of the LACE-BARK (*LAGETTA LINTEARIA*, *Juss.*). Of the latter are fruits of GNETUM GNEMON, *L.*, from the Moluccas, and half-ripened fruits of ENCEPHALARTOS PUNGENS, *Lehm.*, from the conservatory at Chatsworth. On the floor are larger bottles containing unripe fruits of ENCEPHALARTOS CAFFER, *Lehm.*, from the Cape of Good Hope, the axis of the cone of the same specimen of which the model is exhibited in Case 10, as it appeared when all the scales had fallen, flowers of DAMMARA AUSTRALIS, *Lamb.* (the COWDY-PINE of New Zealand), flowers of the WARATA (*TELOPEA SPECIOSISSIMA*, *R. Br.*), the most splendid of New Holland PROTEACEÆ, and fruits of the CHOCOLATE-NUT (*THEOBROMA CACAO*, *L.*)

The upper shelves in Case 15 are occupied by MONOCOTYLEDONOUS specimens of various families. On the lower shelves is placed a collection of ROOT-PARASITES, comprising several specimens of RAFFLESIA ARNOLDI, *R. Br.*, the largest of known flowers, the whole plant consisting of a single flower, which, when expanded, measures three feet in diameter, a smaller species of the same genus (*RAFFLESIA CUMINGII*, *R. Br.*), several species of BALANOPHORA, *Forst.*, CYNOMORIUM COCCINEUM, *L.*, from the island of Gozo near Malta, PHYLLOCORYNE JAMAICENSIS, *Hook. fil.*, LOPHOPHYTUM MIRABILE, *Schott. and Endl.*, SARCOPHYTE SANGUINEA, *Sparm.*, HELOSIS CAYANENSIS, *Rich.*, LANGSDORFFIA HYPOGÆA, *Mart.*, a species of MYSTROPETALUM from the Cape of Good Hope, APHYTEIA HYDNORA, *L. fil.*, also from Southern Africa, and CYTINUS AMERICANUS, *R. Br.* The large bottles on the floor contain specimens of RAFFLESIA ARNOLDI, *R. Br.*, of the BREAD-FRUIT (*ARTOCARPUS INCISA*, *L. fil.*), of the JACK (*ARTOCARPUS INTEGRIFOLIA*, *L. fil.*), of the PALMEIRA-PALM (*BORASSUS FLABELLIFORMIS*, *L.*), and of a monstrosously developed fruit, brought from China, of a species of CITRUS, *L.*, in which the divisions are enormously multiplied, and partially separated from each other.

Cases 16, 17, and 18, which terminate the series of Wall Cases, are occupied by a collection of CLAY MODELS OF ENGLISH FUNGI, made by the late Mr. James Sowerby, while engaged in the publication of his work on that tribe of plants, and representing for the most part the identical subjects depicted in it. They are all named in conformity with the work, and are furnished with references to the plates in which the species are figured. The arrangement is that of the Rev. M. J. Berkeley in the "English Flora" of Sir William J. Hooker. On the upper and middle shelves of Case 16 are placed Models of EDIBLE and POISONOUS FUNGI, made in Germany.

The Table Cases are chiefly occupied with SECTIONS OF WOODS.

The first Table, on entering from the Eastern Doorway, lettered A, presents sections of TREE-FERNS, PALMS, and other MONOCOTYLEDONOUS structures, CONIFERÆ, CYCADEÆ, and WINTERÆ. The FERNS are placed in the Division A 1; the PALMS commence in the same division, and are continued through the greater part of the next, A 2; and the other MONOCOTYLEDONOUS structures follow in the same division. On the opposite side of Table A, Divisions 3 and 4, are placed specimens of numerous CONIFEROUS WOODS; and a few specimens of CYCADEÆ and WINTERÆ complete the Division A 4.

Four of the divisions of the next Table, B, are occupied by a series of MISCELLANEOUS WOODS, principally CLIMBERS, and chiefly from Brazil. Among these attention may be particularly directed to the species of CLEMATIS, to those of COCCULUS and other MENISPERMEÆ, and to the Malpighiaceæ genera, STIGMAPHYLLON and TETRAPTERIS, in the division lettered B 1; to the species of PAULLINIA, GOUANIA, LEGUMINOSÆ, and MYRTACEÆ, in B 2; to the parasitic genera VISCUM and MYZODENDRUM, to ASPIDOSPERMA EXCELSUM, *Benth.*, to the species of STRYCHNOS, to BIGNONIACEÆ of various genera, to CECROPIA, POUROUMA, and FICUS, in B 3; and thence passing to the first division on the opposite side of the Table, B 4, to the species of PIPER, of PISONIA, of ARISTOLOCHIA, and several woods of curious structure, whose names are unknown, no corresponding specimens having been received along with them. The middle division on the outer side of this Table, B 5, exhibits MISCELLANEOUS specimens, chiefly illustrative of diseases, wounds, or other injuries of trees; of their reparation either in whole or in part; of the results of incisions made through the bark into the wood, &c., &c. The concluding division, B 6, contains a series of specimens of CYCADEÆ, in continuation of those exhibited in Table A 4, chiefly presented by James Yates, Esq., illustrating various species of CYCAS, MACROZAMIA, ENCEPHALARTOS, ZAMIA and CERATOZAMIA, among which may be particularly noticed a cone of CYCAS REVOLUTA terminating in a cone of foliaceous scales, a double-headed cone of MACROZAMIA SPIRALIS, cones of ZAMIA YOTESTĀ, Z. LINGIFOLIA, &c., &c.

Table C contains specimens of WOODS obtained from various parts of the world, and arranged as follows:—In the division C 1 are placed a series of WOODS OF CEYLON, arranged in alphabetical order, according to the Cingalese names, with the scientific names, when known, ap-

pended. Sections of these woods exhibit the transverse as well as the vertical structure. Section C 2 commences with a set of Woods, chiefly from New Holland and New Zealand, obtained from the Model Room of the Board of Admiralty at Somerset House, and ends with specimens, in longitudinal and transverse sections, of the woods used in the construction of the carriages on the North-Western line of railway. A set of WOODS OF BRITISH GUIANA, arranged for the most part alphabetically, according to the native names, occupies the whole of the division C 3, and a part of C 4; and these are followed, in the latter division, by specimens of a set of Woods from New Holland, Van Diemen's Land, and New Zealand, imported in the ship *Dromedary*, in 1821; by specimens of a set of Timber Trees of Van Diemen's Land; by specimens of a few Chilian Woods; and by a set of four-and-twenty WOODS OF THE EAST INDIES, including most of those in common use for ship-building and other purposes of construction.

The opposite Table, D, is chiefly occupied by an extensive series of CABINET-WOODS, including nearly all of those which are more or less frequently employed by the London cabinet-makers, and arranged alphabetically, according to the names by which they are ordinarily known in the trade. These specimens fill nearly the whole of Divisions D 1, D 2, D 3; and the remaining division of the Table, D 4, is devoted to specimens of the principal varieties of CONIFEROUS WOOD, or DEALS, in common use.

The middle Table on the northern side of the room, lettered E, commences with a series of WOODS OF NEW HOLLAND AND VAN DIEMEN'S LAND; Division E 1 being entirely occupied by Woods of the MYRTLE TRIBE, the most conspicuous of which belong to the genus *EUCALYPTUS*, and are mostly distinguished by their native names. Division E 2 contains other Woods of Australia, together with a few from New Zealand. The divisions lettered E 3 and E 4 contain a series of WOODS FROM SOUTHERN AFRICA, alphabetically arranged, according to the names given by the Dutch colonists. E 5 is filled with Miscellaneous specimens of Woods from various quarters, among which are sections of a remarkable wood from the Moluccas, sent under the name of Nutmeg-wood, but probably belonging to the family of MENISPERMEÆ, of a tree, probably Leguminous, from Santa Elena, in the Republic of Ecuador, thickly coated with a yellow resinous secretion, the branched stem of a species of *Geranium* from S. Africa (*MONSONIA HERITIERI*) almost wholly converted into a smooth gummy substance; together with sections of MAHOGANY (*SWIETENIA MAHOGANI*, L.), BREAD-FRUIT (*ARTOCARPUS INCISA*, L. *fil.*), of various species of EBONY, and of the TIL (*LAURUS FÆTENS*, Sol.) of Madeira, a wood the intense fœtor of which is apparently undiminished after more than a century's preservation in the Sloanean Collection. E 6 is filled with PROTEACEOUS WOODS, and with the Woods, in many respects similar, of several species of the genus *CASUARINA*.

The last Table, lettered F, contains a series of specimens of the genus *BANKSIA*, together with a few of the nearly related genus *DRYANDRA*. The former are geographically arranged, according as they



are derived from the east coast of New Holland, the north, or the west coast. The latter are wholly from the west. Passing hence into the

## SECOND ROOM.

*The Wall of the Eastern End* is occupied by two large transverse sections of trunks, presented by the Canadian Commissioners of the Exhibition of 1862, the one of *QUERCUS ALBA* (the WHITE OAK) and the other of *JUGLANS NIGRA* (the BLACK WALNUT), both from Upper Canada. In the corner is a flowering specimen of a species of *AGAVE*, from the garden of the Apothecaries' Company at Chelsea; and by the side of the doorway a young ash-tree, denuded of its bark, shewing the tracks of a destructive insect (the *Scolytus destructor*) on the surface of the wood.

*In the Wall Cases of the South Side* is placed an extensive collection of FOSSIL WOODS, polished and in many instances sliced so as to exhibit their internal structure, bequeathed by the late Mr. Robert Brown. They are arranged as follows:—In Case 1 are placed the FOSSIL FERNS and their allies; in Case 2, the FOSSIL CYCADS, SIGILLARIAS with their STIGMARIA roots, and STROBILI of various kinds; Cases 3 and 4 contain FOSSIL PALMS, and Cases 5 and 6 FOSSIL EXOGENOUS WOODS.

In the corner is a remarkable cylinder of CORK, removed from the trunk, from the Mountains of Valencia, presented by the Spanish Commissioners to the Exhibition of 1862.

*The Wall Cases on the North Side* are filled with a large collection of Australian Woods, presented by the Australian Commissioners to the Paris Exhibition of 1855.

The TABLE CASES are chiefly occupied by Specimens of Woods, arranged as follows:—

In Cases 1, 2 and 3, are placed a large series of Woods from the interior of Brazil, among which may be noticed many varieties of ROSEWOOD. Part of Case 3 and Case 4 contain Woods of New Zealand; and Cases 5—8 are filled with sections of Woods of New Holland, obtained, like those in the Wall Cases, from the Australian Commissioners to the Paris Exhibition of 1855.

Case 9 is occupied by a Collection of Woods from the Cape of Good Hope, bequeathed by Major-General Hardwicke; Cases 10—12 contain sections of Woods of Ceylon; Case 13 exhibits specimens of various substances (chiefly vegetable) subjected to intense heat in the great fire in Tooley-street in June, 1861, and a set of Woods (native and foreign) grown in Scotland; Case 14, Woods of Van Diemen's Land; Case 15, of Lower Canada; and Case 16, of Upper Canada.

JOHN JOSEPH BENNETT.

## DEPARTMENTS OF ANTIQUITIES.

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THE collections in these Departments are divided into two series. The first, consisting of Sculpture, including Inscriptions and Architectural remains, occupies the Ground Floor of the South-western and Western portions of the building; and to this division have lately been added some rooms in the basement, not originally designed for exhibition, but now supplying the only space which the extensive acquisitions recently made from Assyria and other countries have left available for that purpose. The second series, placed in a suite of rooms on the Upper Floor, comprehends all the smaller remains, of whatever nation or period, such as Vases and Terracottas, Bronzes, Coins, and Medals, and articles of personal or domestic use. To the latter division is attached the collection of Ethnographical specimens.

The arrangement of the series of Sculptures is still incomplete. So far, however, as that arrangement has been carried, the collections are so disposed as to admit of being visited, with few exceptions, in chronological order, from the earliest monuments of the Egyptian Pharaohs down to the latest memorials of the Roman dominion in this country. The peculiar form of the galleries has made it necessary to place the most ancient remains at the North-western extremity, which is farthest from the Entrance Hall; so that a visitor, wishing to pursue the more natural historical course, is recommended to descend the North-western staircase from the Gallery of Minerals and Fossils, on the Upper Floor, and enter the Ground Floor by the Egyptian Vestibule, proceeding through each apartment in the reverse order to that adopted in the ensuing description, which commences with the latest, or Roman monuments, and is continued through the Lycian, Greek, and Assyrian, to those of Egypt. The arrangement of the four principal series of sculptures may be stated generally as follows: the Roman,

including the mixed class termed Græco-Roman, occupies the South side, running East and West: the Greek, strictly so called, the Assyrian, and the Egyptian, form, approximately, three parallel lines, running North and South, at right angles to the Roman. To the left of the Hall, on entering the building, is the

### ROMAN GALLERY.

On the South side, under the windows, are miscellaneous Roman antiquities discovered in this country, belonging to the Department of British Antiquities. On the opposite side is the series of Roman Iconographical or portrait Sculptures, whether statues or busts, forming part of the Department of Greek and Roman Antiquities. Each wall is divided by pilasters into six compartments.

### ANGLO-ROMAN ANTIQUITIES.

Immediately to the left of the door, on entering, are Pigs of lead, marked with Roman names, which specify either the mines from which the metal was obtained, or the Emperors, or local authorities, by whose license it was worked and sold.

Against the walls are mosaic or tessellated Pavements.

The oblong piece in Compartment I., decorated with a figure of Neptune, amidst fishes and marine monsters, was found in the ruins of a Roman villa at Withington, Gloucestershire. The large pieces in Compartment II., and the two smaller pieces, to the left hand, in Compartment III., originally formed part of the same pavement, though the space does not admit of placing them in juxtaposition.

The right-hand fragment in Compartment III. was discovered at Woodchester, in the same county.

In each of the first four Compartments stands a Sarcophagus, which, like most monuments of Roman sculpture found in this country, exhibits, more or less, the rudeness of provincial art. Within the Sarcophagus in Compartment IV. (which was discovered in London) was found a leaden coffin, the lid of which may now be seen above the Sarcophagus. Within the three other Sarcophagi, were discovered various remains, consisting chiefly of vases of glass or red earthenware, and in one instance a pair of richly-ornamented shoes, all of which are exhibited in glass cases in the British Room.

The large scroll in Compartment V. is probably an ornament from the cover of a Sarcophagus. It was found (with the fragment of a Mill-stone, now placed on it, and two sepulchral Inscriptions, in Compartment VI.) at the foot of the old Roman wall of London. In the intervening spaces are placed Roman Altars

Against four of the pilasters on this side stand Ogham Inscriptions, of which three are from Ireland, and one from Fardell in Devonshire.



Against another pilaster is a remarkable Altar, with a dedication in Greek to the Tyrian Hercules.

Against the Western wall is a large Basin, in the form of half an octagon, with bas-reliefs on the sides.

The minor sculptures on the South side are all likewise remains of the Roman rule in Britain.

To the same class belong the six specimens of mosaic or tessellated work attached to the upper wall on the North side of this Room. Those in Compartments VII—IX. were discovered in London; and those in Compartments X—XII., at Abbot's Ann, in Hampshire.

AUGUSTUS W. FRANKS.

### ROMAN ICONOGRAPHY.

Along the North side of the gallery is arranged the series of Roman portraits, in chronological order. The period included within each of the six compartments is inscribed in gilt letters on the wall. Upon the pedestal of each statue, or bust, are inscribed, when known, the name of the person represented, the dates of such person's birth, death, and (if an Emperor) of his reign, and the site where the sculpture was discovered.

The greater part of the collection which here commences, and which is continued through the four succeeding, or Græco-Roman, rooms, was formed by Charles Townley, Esq., and purchased, after his decease in 1805, for £20,000. Subsequent acquisitions have been made by the bequest of the collection of R. Payne Knight, Esq., in 1824, and by various individual purchases and donations.

Compartment VII.—Portraits of unknown persons, of uncertain period, though probably belonging to the first and second centuries after Christ.

Against the pilaster, a statue of an unknown personage, wearing the *toga*; apparently dating not far from the Christian Era.

Compartment VIII.—Heads of Julius Cæsar, Augustus, Tiberius, and Nero, and bust of Domitia (wife of the Emperor Domitian).

Against the pilaster, a figure of uncertain period.

Compartment IX.—The following busts, or heads:—Trajan; a barbarian chieftain; Hadrian in armour; his favourite Antinoüs; and Hadrian undraped.

Against the pilaster, a statue of Hadrian, in armour.

Compartment X.—Busts of Ælius Cæsar (the adopted heir of Hadrian, but who died in the lifetime of that Emperor); of Sabina (wife of Hadrian); of a young man (with a dedicatory inscription

on the pedestal); of a lady named Olympias (also bearing a dedicatory inscription); and of Antoninus Pius.

Against the pilaster, statue of Marcus Aurelius, in civil costume.

Compartment XI.—Busts of Marcus Aurelius (attired as a *Frater Arvalis*); of his wife Faustina the Younger; of his colleague in the Empire, Lucius Verus; and of Commodus.

Against the pilaster, statue of a person in military costume, of about the close of the second, or beginning of the third century.

Compartment XII.—Busts of an unknown person of the period of Lucius Verus; of Crispina; of Septimius Severus; of Caracalla; of Julia Mamæa; of Gordianus I.; and of Otacilia Severa (wife of the Emperor Philip).

## FIRST GRÆCO-ROMAN ROOM.

This and the two succeeding rooms are appropriated to statues, busts, and bas-reliefs, of the mixed class termed Græco-Roman, consisting of works discovered (so far as is known) in Italy, but owing their origin and character, either directly or mediately, to the Greek schools of sculpture. Some few of these may, perhaps, be original monuments of the autonomous or ante-Roman period of Greece, afterwards transported by the conquerors to their own country, but the majority were certainly executed in Italy during the Imperial times, though generally by Greek artists, and in many instances copied, or but slightly varied, from earlier Greek models. The description of this room commences from the North-West angle.

Here are a statue of an Athlete, a head of Serapis, and a small seated statue of Jupiter, in which are combined the attributes of Pluto (*Hades*), with those proper to Olympus. Between the columns which separate this room from the Egyptian room, is an equestrian figure restored as the Emperor Caligula, but probably a work of the period of Caracalla.

Along the same side, east of the equestrian figure, is a small triple statue of Hecate, or Diana *Triformis*, with a Latin inscription recording the person who dedicated it.

Against the adjoining pilaster, a statue of Ceres (*Demeter*), with some of the attributes of Isis.

On the East side of the room are a statue of a dancing Satyr, and a Satyr playing with the infant Bacchus.

On the South side of the room are a statue of Diana, a statue probably of a hero, a statue of Venus, a torso of Venus formerly at Richmond House, a head of Mercury, a head of Juno, several heads of Apollo and Diana, and a bust of Homer.

On the West side of the room are a colossal head of Jupiter, two colossal heads of Minerva, and a head of Minerva with the drapery and helmet restored in bronze.

## SECOND GRÆCO-ROMAN ROOM.

In an alcove in this room is the Townley Venus found at Ostia ; in the alcove on the opposite side is an athlete hurling a disc, presumed to be a copy of the celebrated Discobolus of Myron.

In the angles of this room are four heads ; the Giustiniani Apollo, purchased at the Pourtalés sale ; a female head from the Townley collection, formerly called Dione ; an heroic head from the same collection, and a female head, perhaps of a marine goddess, from the Pourtalés collection.

## THIRD GRÆCO-ROMAN ROOM.

This room contains a variety of statues, busts, and reliefs, most of which represent divine or heroic personages. The description commences from the North-west door, leading to the Lycian Gallery.

On the North side the following may be noticed : Actæon, transformed by Diana into a stag ; a group representing a sacrifice to Mithras, the Persian sun-god ; a statue restored as of Paris ; a tablet in relief, representing the Apotheosis of Homer. In the upper part of the scene are Jupiter, Apollo, and the nine Muses on Mount Parnassus : this relief is inscribed with the name of the sculptor, Archelaus of Priene. Then follow statues of the Muses Thalia and Erato and heads of Muses ; the head of a wounded Amazon on a bracket ; an heroic head restored by Flaxman, and formerly in the collection of the late Mr. Samuel Rogers ; the beautiful female head commonly called Clytie, and which may represent some imperial personage of the Augustan age in the character of a goddess ; a reclining figure of Endymion, and two statues of Cupid (*Eros*) ; a life-size figure bending his bow, and a small figure in the same attitude ; a recumbent figure of Cupid with the attributes of Hercules.

Next to these succeed several sculptures of which Hercules is the subject ; a small statue on a bracket ; a relief, in which he is represented capturing the Mænalïan stag ; and on the Eastern wall several heads arranged on each side of the door. One of these, which is of colossal size, is very similar to the head of the celebrated Farnese Hercules at Naples.

On the South side of the room are a head of Venus ; a seated Muse, inscribed Eumousia ; a life-size statue of Libera, or Ariadne, with a panther ; a head of the youthful Hercules ; a girl playing with *Astragali*. On a bracket above is a torso of Venus stooping to adjust her sandal.



Next in order are, a youthful Bacchus and a group of Bacchus attended by Ampelus, the latter being represented at the moment of transformation into a vine, from which a panther is snatching grapes. On each side of this group is a small statue of a Paniskos or young Pan; the support at the side of each of these figures is inscribed with the name of the sculptor, Marcus Cossutius Cerdo, a freedman.

Further on are part of a group of two boys quarrelling over the game of *astragali*; a statue of Venus; statues of two Satyrs; the head of a Satyr from a statue; the head of a Bacchante; a terminal Satyric figure playing on the flageolet, and two figures of the goat-legged Pan. At the Western extremity of the room is a Mercury, formerly in the Farnese Palace at Rome.

The adjoining staircase leads to the

### GRÆCO-ROMAN BASEMENT ROOM.

In this room are a few figures and reliefs of the Græco-Roman period of inferior merit, and a number of miscellaneous objects in marble or other stones, such as representations of animals, architectural or decorative fragments, and articles of actual use, religious or secular. The contents of this room may be thus arranged in classes:—

I. FIGURES AND RELIEFS.—In the middle of the room a reclining figure of a Naiad, and a Mithraic group inscribed with a Latin dedication; in the third recess on the North side, a relief representing two gladiators fighting with a bull, from the Pourtalés collection; and a votive relief, which represents various articles of toilet dedicated by a priestess; in the fourth recess a similar votive relief, and in the sixth recess a group of Hermes and Herse, from the Farnese Palace, much restored. At the East end of the room are terminal figures of Mercury and of a Satyr.

II. VASES AND FRAGMENTS OF VASES.—In the centre of the room, a large Vase, or *Tazza*, with handles terminating in swans' necks, and a beautiful Vase encircled with a continuous relief, representing Dionysiac orgies. On the North side, a Vase, having in front a Bacchic dance, in relief.

III. CISTERNs OR BASINS.—In the middle of the room is a Cistern of green basalt, perforated at the bottom; and between the first and second windows, an oblong granite Basin.

IV. CANDELABRA AND FRAGMENTS OF CANDELABRA.—In the second recess is a seated sphinx, from the base of a magnificent Candelabrum; against the adjoining pier, a bas-relief of a Candelabrum, and a panel with a Bacchante in low relief, supposed to have ornamented the base of a Candelabrum; underneath, three triangular bases of Candelabra,

and between the fourth and fifth windows, a Candelabrum with three bas-reliefs.

V. ANIMALS.—Between or in the windows, a Butterfly held in the hand of a female; a Ram's head, in the hand of a child; a fragment of a bas-relief, with four horses' heads; a group of two Greyhounds, seated; a head of a Goat; a small Eagle; a bas-relief of a Cow suckling her calf, and drinking; an Eagle; a Swan, in red marble; and a bas-relief of a Cow.

VI. HUMAN FEET.—Between the second and third windows, a colossal left Foot; and two smaller Feet, with serpents twined round the ancles: between the middle windows, a colossal Foot, supposed to be from a statue of Apollo.

VII. TRAPEZOPHORA, OR SUPPORTS FOR TRIPODIAL AND OTHER TABLES.—Between the middle windows, a Trapezophoron, formed of a lion's head and leg, and the upper part of a similar Trapezophoron. Against the opposite pier, a Trapezophoron, formed of a panther's head and leg; and a porphyry Trapezophoron, of similar design.

Between the last two, a semicircular Sundial.

VIII. DOMESTIC FOUNTAINS.—Between the fifth and sixth windows is a Fountain in the form of a shaft, decorated with foliage.

IX. MASKS.—Over the Sundial, a collection of Masks, on a marble panel.

Below, on pedestals, a female Mask, such as was placed on the face of a corpse, and a female tragic Mask.

Against the next pier, a marble Panel, revolving on a pivot, sculptured on both sides with Masks, and intended for a window, or ventilator, in a Roman house; and underneath, a bas-relief of a Mask of Pan.

Between the windows, on brackets, are—

X. FOUR ORNAMENTAL DISCS, sculptured in relief on both sides; originally suspended by chains in the intercolumniations of colonnades, in Pompeian and Roman houses, and also probably in theatres. Their subjects are chiefly Bacchic.

XI. ALTARS.—On the North, South, and West sides of the room are Altars, dedicated to various divinities, one being to Fortuna Redux, for the safe return from some expedition of the Emperor Septimius Severus and his family.

XII. CIPPI, OR LOW COLUMNS, erected by the Romans for various purposes, chiefly monumental. In the fifth window, a capital of a Cippus, perhaps originally placed at the boundary of a vineyard.

In the sixth window is a marble Chair, used for the vapour-bath.

XIII. ARCHITECTURAL FRAGMENTS AND DECORATIONS.—On the North side of the room is a bas-relief, apparently from a triumphal arch or column, representing armour. Against the Eastern wall, an ornamental Console, with a small figure of Victory; on each side of this, a Victory sacrificing a bull, probably from a triumphal arch; over these, two slabs from the internal and external Friezes of a circular edifice; on each side of the preceding, the Capital of a Pilaster. On the floor, part of a mosaic Pavement, representing the head of Neptune; in the third and fourth recesses, two mosaics, one representing a landscape

with a lion and stag; the other an Amazon reclining against her horse.

XIV. SARCOPHAGI OR CINERARY URNS.—Against the first pilaster a semicircular cinerary Urn, with a relief of Phædra and Hippolytus. In the fourth recess a Sarcophagus, with a relief of children at play.

Returning to the head of the staircase, the door on the left leads to the

### LYCIAN GALLERY.

The collection in this room consists of architectural and sculptural remains obtained from ancient cities in Lycia, one of the South-west provinces of Asia Minor, which was inhabited by a mixed population consisting of two aboriginal races called Solymi and Termilæ, and Greeks, who had colonized it at an early period. These monuments were removed from that country in two expeditions undertaken by Her Majesty's Government in the years 1842–1846, under the direction of Sir C. Fellows, by whom the greater part of them were discovered. They consist of sculptured remains, ranging in date probably from the sixth century B.C. to the period of the Byzantine Empire. With them are exhibited plaster casts of some other sculptures, of which the removal was not found practicable, but of which facsimiles were thought needful as illustrations of the history of art, and materials for the study of a language apparently peculiar to Lycia. The sculptures are all from the city of Xanthus, except when otherwise specified. The following are the most remarkable:—

No. 1. Bas-reliefs from the Harpy tomb, which stood on the Acropolis. The sculptures, as will be seen by the model adjoining, originally decorated the four sides of a rectangular solid shaft, about seventeen feet high, which was surmounted by a small chamber, of which the door is visible on the West side of the monument. The style indicates a date probably not later than B.C. 500. The subjects of the bas-reliefs are variously interpreted; on the North and South sides are Harpies bearing off the daughters of Pandarus; beside these are seated figures, probably deities; and other personages from the Greek mythology complete the adjoining scenes.

Nos. 2–8. A frieze of Satyrs, and wild animals.

Nos. 9–16. A frieze representing cocks and hens.

Nos. 17–21. Another frieze, of archaic style, with a procession of chariots, horsemen, &c.

No. 23. The gable end of a tomb, on which are sculptured two figures beside an Ionic column, surmounted by a Harpy.



Nos. 24-27. Similar portions of tombs with figures of Sphinxes in relief. These, and No. 23, are all of the same early style.

Nos. 28-30. Three draped female torsos of an architectural character.

No. 31. Stone chest, from the top of a *stelè*, or columnar tomb. On one side is a man stabbing a lion, on another a lion with a cub.

No. 32. Square block, decorated with lions' heads, believed to have been originally at the summit of the inscribed monument of Xanthus.

Nos. 34-140. These sculptures and architectural members formed part of the building, of which a restored model, with a ground-plan of the remains as they were found *in situ*, and a picture of the scene of the discovery, is placed in this room. The model, made under the direction of Sir C. Fellows, and presented by him to the Museum, exhibits an Ionic peristyle building, with fourteen columns running round a solid *cella*, and statues in the intercolumniations, the whole elevated on a base, which stands upon two steps. This building has by some been considered a trophy in memory of the conquest of Lycia by the Persians under Harpagus, B.C. 545, though it was probably not erected till some time in the next century. Another conjecture is that the bas-reliefs represent the suppression, by the Persian satrap of Lycia, of the revolt of the Cilicians against the Persians, B.C. 387.

Nos. 34-49. Sculptures of the broader frieze supposed to have encircled the base; they represent contests between heavily armed Greek warriors, and more lightly equipped antagonists in Asiatic costume.

Nos. 50-68. The narrow frieze which ran round the upper part of the base. On Nos. 50-53 is seen the attack upon a city, supposed to be Xanthus. Nos. 55-59 represent a general combat between Greeks; Nos. 60, 61, a walled city, besieged; No. 62 a Persian satrap, supposed to be Harpagus, receiving a deputation from the besieged city, with a slave holding an umbrella over his head; Nos. 65, 66, a sally from the town; No. 67, the retreat of the Lycians into the city.

No. 69. Capping stones of the east front of the base.

Nos. 70-74. Columns and portions of columns from the peristyle.

Nos. 75-84. Statues which were placed in the intercolumniations: they represent female figures, which, from the marine emblems at their feet, are probably Nereids.

Nos. 95-105. Narrow frieze which surrounded the *cella*: the subject is an entertainment, with a sacrifice of rams, bulls, and goats.

Nos. 106-109. Coffers of the ceiling, from the Eastern front.

Nos. 110-123. Narrow frieze supposed to have surrounded the exterior of the building; it represents dresses, horses, &c., brought to a satrap; the chase of the bear, and of the wild boar; and a battle of horsemen and foot-soldiers.

No. 125. Eastern pediment with various figures, probably divinities.

No. 126. Half of the Western pediment—six warriors fighting.

No. 132. Draped figure of a female in rapid motion, from the South *acroterium* of the pediment; like those previously described, Nos. 75-84.

No. 135. Similar figure from the North *acroterium*.

Nos. 139, 140. Two crouching lions, found at the base of the monument, and conjecturally placed, in the model, within the colonnade.

No. 141. Cast of a portion of the square *stelè*, called the Inscribed Monument; it is covered with an inscription in the Lycian language, in which there is mention of the son of Harpagus, and several Lycian towns and states; on the north side is a Greek inscription, commencing with a line of the poet Simonides, who flourished B.C. 556, and recording the exploits of the son of Harpagus, in whose honour this monument was erected in the market-place of the twelve gods.

No. 142. Tomb of a satrap of Lycia named Paiafa, with a roof in the form of a pointed arch, surmounted by a ridge. On each side of the roof is an armed figure, perhaps Glaucus or Sarpedon, in a chariot of four horses, and along the ridge a combat of warriors on horseback, and a Lycian inscription; in the Western gable is a small door for introducing the corpse. The sides of the lower portion present bas-reliefs of warriors in combat, the satrap Paiafa seated, and other figures of men, or gods, with inscriptions. On the roof is the name of Itimse, who made that part of the tomb.

No. 143. Roof of a tomb, similar to No. 142, apparently of a person named Merewe; on the ridge are various subjects in bas-relief, and on each side below is Bellerophon in a chariot, attacking the Chimæra.

Nos. 145-149. Casts from a tomb excavated in the solid rock at Pinara. On the two lowest are interesting representations of an ancient walled city.

Nos. 150-152. Casts from the bas-reliefs of a rock-tomb at Cadyanda, interesting from bilingual inscriptions in the Greek and Lycian languages, which accompany several of the figures.

Nos. 153-156. Casts of inscriptions in Greek, Lycian, or both languages, from different localities in Lycia.

No. 156.\* Fragment of a Lycian inscription.

No. 157. Casts from a pedestal decorated with bas-reliefs.

No. 158. Cast of Bellerophon attacking the Chimæra.

No. 159. Bilingual inscription in Greek and Lycian in honour of Pixodarus, King of Caria, B.C. 340.

Nos. 160, 161. Casts from the gable ends of two tombs.

No. 165. Inscription from Xanthus, dated in the 9th year of Ptolemy Philadelphus, king of Egypt.

No. 166. Casts of the sculptures of a rock tomb at Myra, coloured to represent its present condition.

No. 172. Two metopes, with the head of Diana, from the Roman arch at Xanthus.

No. 173. Roman square monument: on one side are Plutus and Fortune, on the other is a Persian, shooting at various animals.

No. 175. Part of the interior frieze of a tomb at Antiphellus, probably representing nymphs.

No. 176. Greek inscription of the Roman Imperial times.

No. 176\*. Cippus, in shape of a cinerary urn.

In a glass case, in the middle of the room, are several smaller objects, found in the Acropolis of Xanthus.

The door on the North side of the Lycian Gallery opens into a small ante-room, in which are on one side a Canephora, and in the opposite recess a figure of Apollo ; round the walls on each side are a number of heads, most of which represent philosophers and other real personages. Those of Demosthenes and Pericles are among the most interesting.

### FIRST ELGIN ROOM.]

This and the succeeding room contain the sculptures and inscriptions from Athens and Attica. The largest and most valuable portion was obtained by the Earl of Elgin, when Ambassador at Constantinople, in the years 1801–1803, by virtue of a firman from the Sublime Porte, authorizing him to remove from Athens whatever monuments he might desire. The Elgin Collection, which includes some additional marbles acquired subsequently to 1803, with several casts and minor objects, was purchased from the Earl by Parliament, in 1816, for £35,000. Besides the Elgin Marbles, these rooms contain several casts of monuments now at Athens, obtained by permission of the present Greek Government, with a few other minor objects.

The most important series in this room consists of the two groups, arranged one on each side, which originally decorated the Eastern and Western pediments of the Parthenon, or temple of Minerva, at Athens. Of this building some notice will be given in the description of the succeeding, or Second Elgin Room, to which its remains more properly belong : the pedimental figures having only been transferred to this room owing to the want of space in the other for so arranging them as not to interfere with the frieze which surrounds it. These statues, executed under the superintendence of Phidias,



the greatest of ancient sculptors, form collectively, notwithstanding their dilapidated condition, the most valuable monument of Greek art which has descended to modern times.

The group on the West side of this room belonged to the Eastern pediment of the temple, and represented, when perfect, the miraculous birth of Minerva from the head of Jupiter. The central figures, by which the action of the scene was expressed, have, with the exception of a single fragment, perished, without any delineation or copy of them surviving. Their place is here indicated by the opening in the middle of the group, which must be understood as representing a space of between thirty and forty feet. Of the figures which remain, the following are the designations most generally received, though subject to much difference of opinion :—

At the South end of the pediment, the upper part of the figure of Hyperion, or the Sun, rising from the sea, as at the approach of day; heads of two horses from the chariot of Hyperion; a male figure, reclining on a rock, covered with a lion's skin, generally called Theseus; two goddesses, probably Ceres and Proserpine, sitting on low seats; Iris, the celestial Messenger, in rapid motion, as if to announce on earth the intelligence of the birth of the goddess.

At the North end of the pediment, torso of Victory; group of two seated and one recumbent female, supposed to be the three Fates; head of a horse from the chariot either of Night, or of the Moon, descending into the sea.

On the opposite side of the room are the remains of the Western pediment, in which was represented the contest of Minerva with Neptune for the soil of Attica. Though this group is now in a more fragmentary state than the other, it was more perfect in A.D. 1674, when drawings, still extant, were made of all the sculptures of the temple by Carrey, a French artist, and we are thus enabled to supply many of the missing portions with greater certainty. Those statues which still remain at Athens are here represented by casts.

Beginning at the North end the figures are as follow :—

Recumbent statue, generally called the river-god Ilissus, but more probably the Cephissus; cast of a group, commonly known as Hercules and Hebe; male torso, supposed to represent Cecrops, the first king of Attica; upper part of the head, and fragment of the breast, of Minerva; upper part of the torso of Neptune; draped female torso, supposed to be Amphitrite; lower part of a seated female figure, perhaps Latona; cast of the torso of a crouching male figure, by some considered as the river-god Cephissus, but more probably the Ilissus; part of a recumbent female figure, perhaps the nymph Callirrhoe.

Against the wall, behind the figures of this pediment, are placed casts from some fragments of horses, which probably belonged to the chariot of Minerva.

At the North end, on a stone table, is a cast from the head of the figure of Victory, which formerly belonged to the Western pediment.

On the same table is a cast from another head, now in the Imperial Library at Paris, believed by M. Lenormant (the donor of this cast) to have belonged to the same group of statues.

The other sculptures in this room are from various localities in Athens and Attica, and belong to different periods.

The earliest specimen is a cast from a bas-relief, at the South end of the room, representing a figure stepping into a car; the original, which is still at Athens, was discovered on the Acropolis, and is supposed to have belonged to the older temple of the goddess, which was destroyed prior to the erection of the Parthenon. On each side of this is a small votive tablet.

At the same end of the room, on the other side of the doorway, is a large bas-relief found at Athens, and representing Bacchus between a Bacchante and two Sileni; though the style of sculpture appears archaic, it is probably only a late imitation of the earlier schools. Below this are two votive tablets; and in front, a marble Sundial, from Athens, bearing the name of the maker, Phædrus, probably not older than the time of the Emperor Severus. Adjoining is a cast of an owl, from Athens.

At the North end of the room, attached to the wall, are some sculptures from the Temple of Wingless Victory at Athens. This building, which appears to have been nearly contemporary with the Parthenon, was probably designed to commemorate some victories of the Athenians, both over the Persians and over rival Greek states. It was of Ionic architecture, and stood near the Propylæa of the Acropolis.

The series consists, firstly, of four marble slabs, and a cast from a fifth slab, belonging to the upper frieze of the building, representing, in high relief, Athenian warriors combating with enemies, some in Asiatic, others in Greek, costume; and secondly, of casts from four slabs belonging to the lower frieze, representing five figures of Victory, two of them leading a bull to sacrifice. These reliefs are executed in the finest style.

At this end of the room are several sculptures, not yet arranged, but of which the most important may be mentioned:—

On the East side of the doorway, an undraped life-size statue of a youth, probably Cupid, of a good period.

On the West side, the lower portion of a draped female figure and a draped torso of Æsculapius.

On the table adjoining the Cupid, a cast from a mutilated female head of very fine style; a trophy, or stand of armour, found at Marathon; a mutilated colossal head from a temple at Rhamnus; and several small statues.

At the North end of the Room, on the West side, is a head of Æsculapius, from the Blacas Collection; and on the East side are casts of two Chairs from the Theatre of Dionysos at Athens.

### SECOND ELGIN ROOM.

As the principal portion of the series of sculptures from the Parthenon is here exhibited, forming the chief contents of this room, a short account of that building may be prefixed to the description. The most ancient temple of Minerva, called the Hecatompedon, which stood on the summit of the Acropolis of Athens, having been burnt by the Persians, B.C. 480, a more splendid edifice was erected between thirty and forty years afterwards, during the administration of Pericles. It was constructed of Pentelic marble, in the Doric order of architecture, and was of the form termed peripteral octostyle. The architect was Ictinus, but the sculptural decorations were executed from the designs and under the direction of Phidias. Two models, made by Mr. R. C. Lucas, are placed in this room, one of which represents the building as it is believed to have been in its original state, the other as it appeared in A.D. 1687, immediately after the bombardment of Athens by the Venetian General, Morosini, when a shell, falling into the middle of the temple, exploded a powder-magazine established there by the Turks, and laid the adjoining portion in ruins.

It will be seen from these models that the *cella*, or enclosed building within the colonnade, was decorated externally with a continuous frieze in low relief, whilst the entablature surmounting the colonnade had a frieze formed of metopes alternating with triglyphs, each metope containing a sculptured group in high relief.

Attached to the Western wall of the room are fifteen of the metopes, and a cast from another, which is now in the Museum of the Louvre, at Paris. They are all from the South side of the Parthenon, and represent combats between Greeks and Centaurs. Casts from three other metopes, still remaining at Athens, and representing various subjects, are inserted in the adjoining walls.

Around the room are placed in a continuous line the slabs removed by Lord Elgin from the frieze of the *cella*, with casts of a few other slabs still existing on the temple, forming altogether more than one-half of the entire series. They are arranged, as far as possible, in



their original order, but it is necessary to bear in mind that, owing to the absence of a considerable portion, several slabs, not formerly connected, are here brought into juxtaposition, and that the effect of the whole frieze is in one sense reversed, by being made an internal, instead of an external, decoration. The subject of the bas-reliefs is the Panathenaic procession, which took place at the festival celebrated every four years at Athens in honour of Minerva.

At the East end of the temple were originally placed the slabs (numbered, in red figures,) 17-24. On two of them (Nos. 18, 19) are deities, and deified heroes, seated; and a priest receiving from a boy the *peplus*, or sacred veil of Minerva. On each side approach trains of females, bearing religious offerings, and under the guidance of officers or magistrates.

On the North side of the building were Nos. 25-46, representing a long cavalcade of chariots and horsemen, and including amongst the latter the most beautifully executed examples of bas-relief which the ancients have left us.

No. 47, representing two youthful horsemen, is the only slab from the West end of the temple. It is succeeded by fourteen casts (Nos. 48-61), taken from the remainder of the frieze at this end.

The remaining bas-reliefs (Nos. 62-90), which are from the South side, and in a very fragmentary condition, exhibit a procession moving in the opposite direction to that hitherto described, the two lines of figures having been so arranged as to meet at the East end. These bas-reliefs represent horsemen, chariots, and victims led to sacrifice.

At the ends of the room are casts of a few isolated slabs from the frieze, which are still at Athens.

Towards the South part of the room is the capital of one of the columns of the temple.

Besides the remains of the Parthenon, the following miscellaneous sculptures and casts are exhibited in this room:—

On the East wall, over the Panathenaic frieze, some casts obtained by Lord Elgin from sculptures still decorating the Temple of Theseus at Athens, a building erected about twenty years earlier than the Parthenon, to commemorate the removal by Cimon of the bones of Theseus from Seyros to Athens.

The casts towards the North end of the room (numbered 136-149) are from the external frieze of the temple, and represent, in high relief, a battle fought in the presence of six seated divinities.

Nos. 150-154, towards the South end, represent a contest between Centaurs and Greeks.

Adjoining these are casts of three of the metopes (Nos. 155-157), exhibiting warlike achievements of Theseus.

On the East side of the room, resting on the floor, is a coffer from the ceiling of the same temple.

At the North end of the Room are some remains taken from the Erechtheum, a temple erected on the Acropolis of Athens, towards the close of the fifth century before Christ, and dedicated jointly to Minerva Polias, and Pandrosos, daughter of Cecrops. It is the purest and most characteristic monument of the Ionic order of architecture remaining in ancient Greece. Its form is oblong, with a hexastyle portico at the East end, and two unusual additions at its North-west and South-west angles; the one a tetrastyle portico, the other a porch supported by six Caryatides, a structure which has been imitated as a decoration to St. Pancras Church, London.

The remains of the temple which are in the British Museum consist of one of the Caryatides, and, by its side, the column which originally stood at the Northern angle of the Eastern portico; on the West side of the room is a considerable portion of the frieze from the wall immediately behind the same column; and near this, a large piece of the architrave, and a smaller fragment of the cornice, from other parts of the building, an ornamental coffer from the ceiling of the interior, and several minor fragments, mouldings, &c.

Towards the North end of the room are the capital of a Doric column, and a fragment of the architrave, from the Propylæa, a building which stood at the entrance to the Athenian Acropolis.

Facing the Eastern door is a colossal draped statue of Bacchus, seated, which formerly surmounted the choragic monument of Thrasyllus, at Athens, erected B.C. 320.

Attached to the Eastern wall are some casts of the bas-reliefs which decorated the frieze of the choragic monument of Lysicrates, erected B.C. 334. They represent Bacchus punishing the Tyrrhenian pirates.

Near these are placed some miscellaneous fragments of architecture from various buildings in Athens and Attica.

The door on the East side leads into the

## HELLENIC ROOM.

The marbles exhibited in this room have been brought, at different times, from various parts of Greece and its colonies, exclusive of Athens and Attica. With them are also exhibited plaster casts of some important monuments of the period preceding that of the marbles. The description commences with the casts.

The earliest and rudest development of the art is represented by four casts, attached to the Western wall, which were taken from

metopes of one of the ruined temples at Selinus, in Sicily. The subjects of the sculpture, which is in very high relief, are mythological.

Next in chronological order should be noticed the restorations, placed on each side of the room, of the Eastern and Western pediments of a Doric temple in the Island of Ægina, erected probably in the fifth or sixth century B.C., and dedicated either to Jupiter or Minerva. The plaster figures in these pediments are casts from the original marbles, which were discovered in 1811 amongst the ruins of the temple, and are now preserved in the Museum of Sculpture at Munich. The group in the Western pediment, here placed on the North side of the Room, represents the contest of the Greeks and Trojans over the body of Patroclus; the imperfect group in the pediment opposite is supposed to represent an incident of the Æginetan expedition against Troy.

The following are the marbles exhibited in this Room:—

First in importance is a collection of marbles discovered in 1812 amongst the ruins of the temple of Apollo Epicurius (or “the Deliverer”) near the ancient Phigalia in Arcadia. This edifice was erected by Ictinus, the architect of the Parthenon at Athens, in commemoration of the delivery of the Phigalians from the plague, B.C. 430.

The most important part of this collection consists of twenty-three sculptured slabs, originally belonging to a frieze in the interior of the *cella* of the temple, and now arranged on both sides of the Room. Eleven of them (Nos. 1-11) represent, in mezzo-relievo, the contest between the Centaurs and Greeks, which has been noticed in describing the metopes of the Parthenon. The other twelve represent the invasion of Greece by the Amazons.

Underneath the frieze are several architectural and sculptural fragments from the same temple, including part of a Doric capital from the outer colonnade, and part of an Ionic capital from one of the columns within the *cella*, the external and internal architecture of the building having been of different orders.

In the Southern half of the Room is an archaic draped female torso from a temple at Rhamnus, in Attica; an archaic figure of Apollo, brought from the East by the late Viscount Strangford; and a statue of Apollo of a somewhat later period, formerly in the Choiseul Gouffier Collection.

In the Northern half of the Room are a statue representing a youth winding a diadem round his head, and presumed to be a copy of the celebrated Diadumenos of Polycletus; a figure of Ceres; and a small archaic draped female torso.

On the East side is a mutilated figure of a Triton, in alto-relievo, from Delos; a draped female statue, life-size, without head or extremities, from Crete; a torso of a male figure, life-size, from Crete, probably a Mercury; and an ancient copy of an archaic bronze head of Apollo.

On the North side of the room, an oblong sculptured monument of



uncertain use, with a bas-relief representing apparently an offering to Juno, from Cape Sigeum, near Troy.

On one side of the Western door a bust of Æschines; on the opposite side, the bust of an unknown philosopher.

C. T. NEWTON.

The East side of the Hellenic Room room opens into the

## ASSYRIAN GALLERIES.

A suite of three long and narrow apartments, running North and South to a length exceeding 300 feet, with an additional room or transept, crossing from their Southern extremity, contains the collection of sculptures excavated, chiefly by Mr. Layard, in the years 1847–1850, on the site, or in the vicinity, of ancient Nineveh. To these has been added a further collection from the same region, excavated in 1853–55, by Mr. Hormuzd Rassam and Mr. W. K. Loftus, under the direction of Sir H. C. Rawlinson, K.C.B., at that time Her Majesty's Consul-General at Baghdad.

This latter collection is arranged, partly in a small room adjoining one of the long galleries, and partly in the Assyrian Basement Room.

These discoveries were for the most part made in extensive mounds, formed by the natural accumulation of the soil over the *débris* of ruined edifices, in the three following localities:—

1. *Nimroud*, believed to be the ancient Calah of Scripture, on the banks of the Tigris, about twenty miles below the modern Mosul. 2. *Khorsabad*, a site about ten miles to the North-east of Mosul, which was excavated for the French Government by M. Botta, and from which was procured the greater part of the valuable collection now in the Louvre, though a few specimens of sculpture have also been obtained for the British Museum. 3. *Kouyunjik*, still indicated by local tradition as the site of Nineveh, nearly opposite Mosul, on the Tigris.

This classification of the localities, which correspond broadly with three successive periods in Assyrian history, forms the basis of the arrangement adopted for the sculptures.

(1.) The monuments from Nimroud, which may be approximately described as ranging from B.C. 930 to B.C. 747, occupy

the Nimroud Central Saloon, in which the visitor, entering from the Greek Galleries, first finds himself; the long apartment immediately to the South, called the Nimroud Gallery; and the western compartment of the adjoining Assyrian Transept.

(2.) The sculptures from Khorsabad, executed under a monarch who is believed to have reigned about B.C. 747–721, are collected in the eastern compartment of the Assyrian Transept, a position not properly corresponding with their chronological sequence, but unavoidably adopted from the deficiency of space in apartments not originally constructed for this class of antiquities.

(3.) The monuments obtained by Mr. Layard from Kouyunjik, which may (with due allowance for the uncertainty of all Assyrian chronology) be placed between B.C. 721 and B.C. 625—the supposed era of the destruction of Nineveh—are arranged in the long room distinguished as the Kouyunjik Gallery. The additional collections excavated by Mr. Rassam and Mr. Loftus, principally at Kouyunjik, and placed in the Assyrian basement, may be regarded as supplementary to that contained in the last-mentioned gallery.

Besides the series of sculptures, the Assyrian collection includes a variety of smaller, but highly curious and instructive objects, discovered at Nimroud and Kouyunjik. These are now exhibited in Table Cases in the galleries.

In the Kouyunjik Gallery is also a Table Case containing various small articles from Babylonia and Susiana. These far-famed regions have as yet yielded to modern researches no large sculptured monuments, nor any artistic remains commensurate with the wealth and power of the Empires of which they were the seat. The principal Babylonian sites which have hitherto been more or less explored are—1. The scattered mounds of Warka, Tel-Sifr near Sinkara, Abu-Shahreïn, and Muqueyer, all dating from the most remote antiquity, and the last supposed to represent the Biblical “Ur of the Chaldees.” 2. The Birs-i-Nimrúd, commonly regarded as the remains of the Tower of Babel, but more probably the site of the ancient fortress of Borsippa, the earliest portion of which was erected by Tiglath Pileser I. about B.C. 1120, though it

was entirely rebuilt by Nebuchadnezzar. 3. The mounds of Babylon itself, which contain no monuments earlier than the reign of Nebuchadnezzar.

In accordance with the system here pursued, under which the visitor to the Sculpture Galleries is conducted, as far as possible, continuously from the later monuments to the earlier, it is necessary, after quitting the Greek collection, to pass through the Nimroud Central Saloon, by its North door, to the

### KOUYUNJIK GALLERY.

The Collection of bas-reliefs in this room was procured by Mr. Layard, in 1849 and 1850, from the remains of a very extensive Assyrian edifice at Kouyunjik, which appears, from the inscriptions remaining on many of its sculptures, to have been the palace of Sennacherib, who is supposed to have commenced his reign about B.C. 721. It was subsequently occupied by his grandson Ashurbanipal, who reigned towards the middle of the seventh century B.C. Monuments of both these kings are included in the collection. Those of Sennacherib are sculptured generally in gypsum or alabaster, those of Ashurbanipal in a harder limestone. Most of the sculptures were split and shattered by the action of fire, the palace having apparently been burnt, probably at the destruction of Nineveh : indeed, many single slabs reached this country in 300 or 400 pieces. These have been simply rejoined, without attempt at restoration. To the left on entering is—

No. 1. A cast from a bas-relief cut in the rock, at the mouth of the Nahr-el-Kelb River, near Beyrout, in Syria, close to the immemorial highway between Egypt and Asia Minor. It represents Sennacherib, standing in the conventional attitude of worship, with sacred or symbolical objects above him, and is covered with a cuneiform inscription. In the rock, adjoining the original relief, are six similar Assyrian tablets, and three Egyptian bas-reliefs, with hieroglyphic inscriptions, bearing the name of Rameses II., who at an earlier period is supposed to have passed through Palestine.

The sculptures on the left, or West side of the Gallery, are all of the period of Sennacherib, and illustrate the wars he



carried on, and the tributes he received. They are, for the most part, fragments of more extensive works. The most interesting subjects are as follows :—

No. 2. A galley, with a beak, propelled by two banks of rowers.

Nos. 4-8. A series of slabs, mutilated in the upper part, which commemorate apparently the expedition of Sennacherib into Southern Babylonia against Merodach Baladan, the same king, apparently, who is mentioned in Scripture as having sent letters and a present to Hezekiah, and to whose messengers the Jewish monarch exhibited all the treasures of his house. The campaign is represented in the bas-relief as occurring in a marshy district; a stream, probably that of the Tigris or Euphrates, is seen filled with islands overgrown with reeds, or jungle; in the water appear numerous fish and crabs; upon the islands many of the enemy have taken refuge, whilst the Assyrians pursue them in boats; and to the right (Nos. 6, 7, 8), on the banks of the stream, are collected the prisoners and spoil.

Nos. 15, 16, 17. A series, of which the upper portion is lost, representing the return from a battle.

Nos. 20-29. Part of a series, representing the siege of a fortified city by the Assyrians. The city is seen on Slab No. 25, planted on a high dome-shaped hill, whilst the assailants advance on each side to scale the walls with ladders. On Nos. 27-29 are represented the results of the contest, the triumph of the besiegers, and the collection of prisoners and spoil. The whole of this series is blackened by fire.

Nos. 34-43. Part of a series of sculptures which originally lined the two walls of a long narrow gallery, leading, by an inclined plane, from Kouyunjik towards the Tigris. On the one side, descending the slope, were fourteen horses, led by grooms; on the other, ascending into the palace, were servitors bearing food for a banquet. The figures are somewhat smaller than life, designed with much freedom and truth; and by comparison with the Panathenaic frieze in the Second Elgin Room, they may furnish a good point of view for estimating the capabilities and defects of Assyrian art. No. 39, on which is seen a marshal or chamberlain with a staff, was originally placed, as here, at a projection in the wall. Amongst the attendants or servitors, represented on Nos. 41-43, is one bearing in each hand a rod with two rows of dried locusts, which are to this day used as food by the Arabs. The other attendants carry wine-skins, birds, pomegranates, and other fruit.

No. 44. A semicircular-headed slab, with a small mutilated figure, standing before a table of offerings, near which are various symbols.

Next follow six slabs (No. 45-50), of a hard, fossiliferous limestone, and of which the surface is in high preservation. They were sculptured under Ashurbanipal, and represent the victories of that monarch over the Elamites, or inhabitants of Susiana.

The first three slabs (Nos. 45-47) represent the battle, a scene of inextricable confusion, occurring near a river, probably the Eulæus. The Assyrians, who are all well armed against an enemy comparatively defenceless, appear throughout not merely victorious, but even exempt from individual injury. The remaining three slabs exhibit the reception of the vanquished by Ashurbanipal and his officers, the submission of the Elamite chiefs, and the tortures inflicted on many of the prisoners. On slab No. 50 is seen a city at the confluence of two rivers, perhaps Shushan, or Susa, between the Eulæus and Shahpur; it presents a curious general view of an Asiatic town.

The remaining bas-reliefs in this room all belong to the period of Sennacherib.

The next six (Nos. 51-56) formed originally part of a series illustrating the architectural works of that king, including, probably, the construction of the very edifice from which the slabs were obtained. On Nos. 51 and 52 is seen the conveyance of a colossal human-headed bull, lying sideways on a sledge, which is propelled, over wooden rollers, partly by ropes in front, partly by a lever behind. On one side is a lofty mound, which labourers are erecting with stones or earth, and which is perhaps designed for the platform of the future palace. The workmen are guarded by soldiers, and superintended by Sennacherib himself, in a chariot drawn by two men. A similar mound is represented on Slab No. 53, with an adjoining stone-quarry or clay-pit, where the materials of construction are prepared. On No. 54 is a portion of a group moving some weighty object; on No. 55 another colossal bull, represented as before; and on No. 56 the monarch, in his chariot, directing some operation sculptured on a lost portion of the series. The background of the slabs exhibits men carrying axes, saws, ropes, and other implements; and along the top are representations of the natural scenery of the country, water filled with fish, anglers floating on inflated skins, boats, banks lined with trees, and a jungle of reeds, in which are deer, and a wild sow with her young.

Nos. 57-59. Across the middle of these slabs a broad river is represented as passing. On its further bank, nearly insulated by a smaller stream, is a city, besieged by the army of Sennacherib, whilst on the right is seen a long procession of captives, with cattle and other spoil. On the nearer bank appears the king in a chariot, amidst officers and attendants, with a large collection of trophies and booty.

No. 60. A human figure, with a lion's head, of uncertain meaning.

In the centre of the room is an obelisk of white calcareous stone, discovered at Kouyunjik by Mr. Rassam, but originally executed for Sardanapalus the Great, an Assyrian king who reigned about two centuries before Sennacherib, and whose principal monuments are to be seen in the Nimroud collection. It is covered with small bas-reliefs, representing the various exploits of the monarch.

Towards the North end of the room is the upper part of another obelisk of the same king, also discovered by Mr. Rassam.

Towards the South end, a circular bowl in limestone, procured by Mr. Layard, and sculptured with bas-reliefs of men and lions.

Four Table Cases in the middle of the room contain small objects discovered in various excavations.

In No. 61 are seals, engraved stones, and cylinders of hard stone of Assyrian, Babylonian, and Persian workmanship; amongst them a cylinder supposed to have been used by Sennacherib; and another with the name of Darius I.

No. 62. Objects chiefly from Chaldæa; a stone inscribed with the name of Merodach-Baladan; fragments of a clay cylinder with inscription relating to Nebuchadnezzar.

No. 63. Terracotta tablets with cuneiform inscriptions: clay seals, two with the name of the Æthiopian king, Sabaco.

No. 64. Objects in iron and bronze—bracelets, fetters, and swords.

### NIMROUD CENTRAL SALOON.

With this room commences the series of sculptures excavated by Mr. Layard in 1847 and 1850, in different parts of the great mound at Nimroud; with which have been placed one or two sculptures since obtained by Mr. Rassam from the same locality.

To the left of the door, on entering from the Kouyunjik Gallery, is a small group of slabs in relief, consisting of sculptures discovered in the South-western edifice of the great mound, which is believed to have been constructed by Essarhaddon, the son and successor of Sennacherib, towards the beginning of the seventh century B.C., with materials obtained, in a great measure, from the spoliation of the palaces erected in other parts of Nimroud by the earlier Assyrian dynasty.

The most important object in this group is a large bas-relief, divided horizontally into two tiers, the upper representing the evacuation of a city, and the lower an Assyrian monarch in his chariot. The inscription, of which a part exists on this slab, and the remainder was upon others adjoining it, records the receipt of tribute from Menahem, King of Israel, and thus indicates that this sculpture was executed either for Pul or Tiglath-Pileser II., though subsequently transferred by Essarhaddon to his own palace.

Adjoining this is a colossal head of a human-headed bull, on a larger scale than any yet brought to Europe, and supposed to be of the time of Essarhaddon himself.

Against the two central pilasters stand two statues excavated by Mr. Rassam in the South-eastern edifice of Nimroud, each representing



the god Nebo, and bearing an inscription to the effect that it was made by a sculptor of Nimroud at the order of Phalukha (or Pul, a king who reigned about B.C. 770), and of his wife Sammuramit, who is supposed to be the original of the somewhat mythical Semiramis of the Greek and Roman writers.

On the opposite, or Western side of the room, are some bas-reliefs discovered by Mr. Layard in the ruins of the Central edifice at Nimroud, which are supposed to be intermediate in date between the ruins already referred to and those of the great edifice at the North-west quarter of the mound. The subjects are chiefly military.

To the left, or Southern side of the passage from the Hellenic Room, is seen the evacuation of a captured city, in which (as well as in the bas-relief immediately above) the various quadrupeds introduced are portrayed with great fidelity and spirit, the sculptor, as usual in Assyrian art, exhibiting greater power in the treatment of animal subjects than of the human form.

On the other side of the passage are three representations of sieges, in which the mounds thrown up by the besiegers, their battering-rams, and archers masked by loop-holed screens, evince their military skill, whilst the three impaled captives, on one of the slabs, give equal evidence of their cruelty.

Above these are two heads, known from the inscription on the left-hand slab to represent Tiglath-Pileser II. and an attendant.

In the centre of the room stands one of the most important historical monuments which have been recovered from Assyria, an obelisk in black marble, found near the centre of the great mound. It is decorated with five tiers of bas-reliefs, each continued round the sides; and the unsculptured surface is covered with cuneiform inscriptions, which appear, from the interpretation of Sir Henry Rawlinson and Dr. Hincks, to contain a complete record of the reign of Shalmaneser King of Assyria, who reigned about B.C. 850. The bas-reliefs illustrate the presentation of offerings to the king by his numerous tributaries, and the inscriptions record the names of the donors, amongst whom are Jehu "of the house of Omri," the Israelitish king, and Hazael, the contemporary king of Syria.

Against the columns are placed two tablets, with figures and inscriptions of Shalmaneser and Ashur-izir-pal, found at Kurkh; on one Abab is mentioned.

The remainder of the Nimroud collection belongs altogether to the period of Asshur-izir-pal, or Sardanapalus the Great, the earliest Assyrian monarch of whom any large monuments have been procured, and who is believed to have reigned about B.C. 930-902. The sculptures were found by Mr. Layard partly in the ruins of an extensive edifice at the North-west

quarter of Nimroud, and partly in two small adjacent temples of the same date, one of which was dedicated to the Assyrian "God of War."

Beside the door into the Kouyunjik Gallery is a colossal lion, which, with a companion figure, decorated the sides of a doorway in one of the small temples just mentioned. It is covered with inscriptions, and, like all the figures found in similar situations, provided with five legs, so as to appear perfect both from the front and the side.

Near this stands a small statue, on its original pedestal, found in the same temple with the lion, and representing Sardanapalus.

Of the remains of the North-west edifice the principal are two colossal figures, one a winged and human-headed lion, and the other a bull, not originally forming a pair, but taken from two different doorways. Though of smaller dimensions than usual, they are, both in delicacy of execution and excellence of preservation, amongst the finest specimens of Assyrian art.

The South door leads into the

### NIMROUD GALLERY.

This room contains a continuation of the series last described. The bas-reliefs on the West side were all found in one chamber of the North-west edifice. Those on the opposite side are partly from other chambers of the same edifice, partly from the small adjacent temple of the "God of War." The slabs with large figures bear inscriptions running horizontally across the middle; those with small figures have generally had inscriptions on the border above and below, though these have in many instances been cut off in ancient times. The double row of slabs occupying the greater part of the West side is arranged exactly as in the original building, excepting that a break occurs in one place, where some slabs have been lost.

The following are the most interesting subjects in this room, commencing on the left, or East side. The first eight slabs are from the North-west edifice:—

No. 19. Two persons, distinguished by their caps and pointed shoes as foreigners, bringing with them two monkeys, as tribute to some personage represented on a lost slab.

No. 20. The king, Sardanapalus, in a richly-embroidered dress, and the cap distinctive of royalty, with a sword, of which the hilt is elegantly decorated with wrestling lions.

Nos. 21-26. Six slabs, representing the king among his attendants, supernatural and human, apparently returned from battle or the chase. The large dimensions, elaborate execution, and almost perfect preserva-

tion of this series, places it among the finest examples of Assyrian bas-relief. The figures are all sumptuously attired, their robes fringed and embroidered with sacred or mystical ornaments; their sandals are painted in black and red, the bows of the eunuchs red, and the eyes of all of them black. It may be observed that the parts here indicated, together with the hair in some cases, and the necks, and edges of the mouths, of two men with lions' heads on two slabs hereafter mentioned, are the only objects on which colour is discernible in any of the Assyrian sculptures; nor does the condition of the surface of those sculptures at all confirm the idea that the whole was originally covered with pigments.

The succeeding slabs (Nos. 27-30) are from the small temple of the "God of War." Nos. 27 and 28 stood originally, as here, at right angles to each other, No. 27 being on the external wall of the building, and Nos. 28, 29, on the side of a doorway leading to one of the chambers. On the opposite side of the doorway was a similar group, of which the slab on the external wall (No. 32) was alone removed by Mr. Layard.

Nos. 28, 29. A four-winged figure, with a three-forked thunderbolt in each hand, pursuing a monster or demon; a composition which, from its repetition on each side the doorway, probably typified the extrusion of the Evil Spirit from the temple. Although shattered into fragments, and much decomposed by fire, these slabs still display considerable merit in design.

No. 29\*. A restoration of the slab which originally occupied the position corresponding to this, and the same in subject as the next.

No. 30. Slab from the opposite side of the doorway, forming the companion to No. 29\*. It presents a figure of the Fish-god, or Dagon.

The remaining bas-reliefs in this room are all from the North-west edifice.

No. 33 represents an eagle-headed figure, evidently a deity, supposed by some to be Nisroch, in whose temple Sennacherib was slain.

No. 36. A lion-hunt, which, though originally belonging to the North-west edifice, had been removed in ancient times, and was found in an isolated situation. It is here placed, for the purpose of comparison, opposite to some slabs of similar subject.

Nos. 37-40. A collection of bas-reliefs, representing what are believed to be religious rites. In each group two figures are seen, standing or kneeling before a species of tree, whose foliage is sculptured similarly to that known as the "honeysuckle ornament" of Greek architecture and vase-painting; one hand of each figure is raised, and generally holds some mystic offering or symbol, such as a fir-cone, a pomegranate-branch, a necklace, &c.

Upon the West side of the room is a similar subject (No. 2), on a bas-relief within a boldly-projected border; two kings are here introduced in the conventional attitude of sacrifice or adoration, and each



attended by a winged and triple-horned figure; above the mystic tree is the symbol of Divinity, sometimes described under the Persian name of Ferouher, being a small figure within a winged circle, holding a ring. The same symbol reappears, under a modified form, in some of the battle-scenes, where the Divinity seems to watch over the person of the king, and sometimes draws a bow at his enemies.

The double frieze, which next succeeds, may be regarded as illustrating the prowess of Sardanapalus, both in the chase and in war.

First come the hunting-scenes—Nos. 3*a* and 3*b*, a bull-hunt, and the successful return; Nos. 4*a* and 4*b*, a lion-hunt, with similar sequel.

Afterwards the military scenes, among which may be distinguished—

Nos. 7*b*–9*b*. The passage of a river by the king and his army. The chariots are embarked in boats; the horses swim behind, guided by halters; many of the soldiers are likewise swimming, supported by skins inflated with air; others on shore are inflating skins previously to entering the stream.

Nos. 10*b*–12*b*. The capitulation of a city, and the king receiving the prisoners and spoil, a subject extending over a part of slab No. 13*b*. The original of No. 12*b* was so shattered, that Mr. Layard did not attempt to remove it, but made a careful drawing, from which has been executed the painting which here fills the vacant space.

Nos. 11*a*–13*a*. The return from battle. To the left is seen the ground plan of a circular building, divided into four apartments, in each of which are figures preparing food; adjoining is a tent, with horses and grooms; beyond are soldiers at their games, and musicians; and to the right, the king in a triumphal procession.

Nos. 13*b*–15*b*. Siege of a city by Sardanapalus, a subject presenting many curious details of military architecture and engineering, both aggressive and defensive; walls with serrated parapets, arched gateways with ornamental mouldings; the assailants at once mining, breaching, and scaling; a battering-ram plied from the interior of a moveable machine, surmounted by a tower, which is filled with archers and slingers; the besieged lowering grappling-irons from a bastion to catch the ram, and hurling firebrands to ignite the machine; the besiegers playing water on the flames; and each side discharging arrows and stones.

No. 16*a*. Upper part of a male figure, with the eyes and hair tinted black, exhibiting a greater amount of artificial colour than any other Assyrian sculpture yet discovered.

In the middle of the room are four Table Cases, containing miscellaneous small objects found at Nimroud, chiefly in the ruins of the North-west edifice, and probably therefore of the age of Sardanapalus.

Case No. 42 contains several bronze bowls, with embossed and engraved ornaments of great beauty and curiosity, some of distinctly Egyptian style, such as winged gryphons, scarabæi, &c.

Case No. 43 has some more bowls, and a remarkable collection of bronze weights, in the form of recumbent lions, on some of which are

engraved bilingual inscriptions, in the Phœnician, and cuneiform or Assyrian characters.

Case No. 44 has several miscellaneous bronze objects, small bells, weapons, and articles of furniture, parts of thrones, chariots, and vases.

Case No. 45 contains some of the most interesting articles in the collection. The principal are a series of ivory-carvings from the North-west edifice, one having an Egyptian name within a hieroglyphical cartouche, and many others exhibiting Egyptian figures or decorations,—a conclusive proof of an intimate connection between Egypt and Assyria at a very early period; a large variety of ivory-carvings of more purely Assyrian character, found in the South-east edifice.

At the North-west angle of this Gallery is a door leading into the

### ASSYRIAN SIDE-ROOM.

In this room, and in the basement room with which it is connected by a staircase, are placed some of the sculptures and other objects procured by Mr. Rassam and Mr. Loftus, after the collection obtained by Mr. Layard had been already arranged. In addition to these are some objects from Babylonia. The wall cases contain miscellaneous objects of different periods discovered in Assyria and Babylonia.

The principal objects in this room are—

A four-sided and arch-headed *stèle*, of limestone, having in front a bas-relief of the king Samsivul, son of Shalmaneser. It was found by Mr. Rassam in the South-east edifice of Nimroud.

Two stones, with reliefs and inscriptions in the reign of Merodach-adan-akhi, a king of Babylon at an early period.

The Wall Cases at the sides of the room contain miscellaneous objects, the most remarkable of which are as follows :—

Cases Nos. 1-4. Assyrian bronze helmets, terracotta figures of the god Dagon, and of the hunting dogs, found behind the bas-reliefs at Nimroud.

Cases 5 & 6. Glass vases, and several Babylonian inscriptions on stone; one of the reign of Esar-haddon.

Cases Nos. 7-12. Various vases of alabaster and terracotta, one of alabaster holding sweetmeats, and a remarkable glass vase, impressed with the name of Sargina, or Sargon, B.C. 719; several prisms and cylinders of terracotta, one with the annals of the first eight years of the reign of Sennacherib, and account of the invasion of Judæa; a series of bricks, with royal names.

Cases Nos. 13-15. Objects in bronze and terracotta, amongst which are a shield, cauldron, and enamelled bricks.

Cases Nos. 16-19. Three earthenware coffins, covered with a blue vitreous glaze, and having small figures in low relief. They were found by Mr. Loftus at Warka, in a mound, formed almost entirely of similar remains, but are not, perhaps, older than the time of the Parthian Empire. Various glazed vessels and part of a bronze throne.

The staircase leads to the

### ASSYRIAN BASEMENT ROOM.

The sculptures arranged in this room, with one exception, belong to the time of Ashurbanipal, the grandson of Sennacherib, having been discovered in the ruins of two palaces at Kouyunjik, excavated, one by Mr. H. Rassam, the other by Mr. Loftus. Dating from the latest period of Assyrian art, they exhibit greater freedom of design, particularly in the animal forms, and greater delicacy of execution, than the bas-reliefs from Nimroud, or even the earlier monuments from Kouyunjik. Among the most remarkable are—

Nos. 1-8. Various operations of the camp, the bringing in of the heads of slain enemies, and registration of spoil and trophies.

Nos. 9-14. Soldiers and musicians, some of whom are captives playing on lyres.

Nos. 17, 18. Assyrian deities.

Nos. 19, 20. Part of the Assyrian army and prisoners of war.

Nos. 21-32. The assault and capture of the city of Lachish by Senacherib; his fortified camp and reception of prisoners.

Nos. 33-53. A lion-hunt by Ashur-bani-pal, or Sardanapalus III. A large area formed by spearmen prevents the escape of the animals. The lions are let loose from cages (No. 52), and are killed by the monarch by arrows, while horsemen attend and gallop round in different directions. One or two lions are seen in different groups attacking the king. The fury of the wounded and agony of the dying lions, as also the impatience of four dogs restrained by their keepers, are admirably delineated.

Nos. 54-62. The capture of a city in Susiana and reception of prisoners by the same monarch.

Nos. 63-74. The return from the chase in a series of slabs of the same size and style as Nos. 33-53. The hunters bear birds and dead lions, and lead the hunting dogs, and sumpter mules laden with nets.

Nos. 75-78. Scenes apparently of a *paradeisos* or park; a musician and lion; and a lion and lioness amidst trees and flowers; keepers and hunting dogs.

Nos. 79-82. Assyrian deities.



Nos. 83-90. Wars of Ashur-bani-pal; the attack of an Arab race, who, mounted on one-humped camels, take to flight, while their tents are surprised and burnt; the siege of two cities and capture of one with its Æthiopian garrison of negroes, placed there by some Egyptian monarch.

Nos. 91-94. A hostile army flying past an Assyrian city or fortress, with an inner building with columns resting on the backs of lions and winged bulls, and a temple with columns and pilasters resembling those of the Ionic order; in front is a tablet with figure of the king and altar like that in the Assyrian transept, and a bridge or viaduct with openings like Gothic arches.

No. 95. Execution of the king of Susiana.

No. 96. Royal attendants bringing offerings.

Nos. 97-102*a*. Pavement slabs with representations of carpets.

Nos. 104-119. A series of slabs divided horizontally into two or three tiers of small figures, remarkable for the delicacy of their execution. They represent hunting scenes, the pursuit of deer, goats, wild asses, and the different modes of killing the lion described in the accompanying inscriptions.

No. 120. Capture and burning of a city; guarding of captives, who are at meals.

No. 121. Fine slab representing Ashur-bani-pal and his queen banqueting under a bower of vines. The king reposes on a couch, at the foot of which the queen is seated on a chair. A musician and attendants with viands and fans wait on the royal pair. Birds and grasshoppers are singing in the adjacent trees, to one of which is suspended the head of an enemy.

Nos. 122-124. Lion-hunting and other scenes.

In the centre of the room are three Table Cases containing several miscellaneous small articles.

Returning up the staircase, and passing again through the Nimroud Gallery, the visitor reaches the

## ASSYRIAN TRANSEPT.

The first or Western Compartment, contains the remainder of the monuments of Sardanapalus the Great, of which the principal part has been described in the Nimroud Gallery.

In the middle is a high arched slab, having in front a bas-relief of the king, with various sacred symbols, and on the sides and back an invocation to the Assyrian gods, and a chronicle of the king's conquests. Before it stands a triangular altar, which originally was so placed, at the entrance to the temple of the "God of War."

At the sides stand a pair of colossal human-headed lions, winged, and triple-horned, which originally flanked a doorway in the North-west edifice. With these terminates the series from Nimroud.

Behind these are two torsos with inscriptions, one of black stone, bearing the name of an ancient Chaldean king; the other of a goddess, found at Kouyunjik, with the name of Asshur-bel-kala, an Assyrian monarch.

On the West wall are casts and sculptures in relief and inscriptions from the palace of the Persian monarchs, about 500 B.C. at Persepolis; and on the South wall casts of Pehlevi inscriptions at Hadji Abad in its vicinity.

On the East side of this Transept, is the Khorsabad Compartment, containing monuments from the palace of Sargina, the founder of the later Assyrian dynasty, about B.C. 747.

Two colossal human-headed bulls, corresponding exactly in dimensions and style with the pair now in the Louvre at Paris, are placed as at the entrance of a chamber, and beside these, two colossal figures of mythological character. This entire group was obtained from Khorsabad by Sir H. C. Rawlinson, K.C.B., in 1849.

Within the recess thus formed are several bas-reliefs procured from the same place in 1847 by Mr. Hector, a merchant residing at Baghdad. They are chiefly fragmentary figures from a more extensive series, some on a large scale, and retaining remains of colour. The horses' heads, facing the window, are richly and carefully finished.

Below these is the only slab obtained by Mr. Layard from Khorsabad; it is in black marble.

At the other end are slabs with inscriptions from colossal bulls, recording the campaign of Sennacherib against Judæa.

In the centre is placed a monument, not belonging to the Khorsabad series, a seated figure of Shalmaneser in black basalt, found by Mr. Layard about fifty miles below Nimroud on the Tigris, in the great mound of Kalah Shergat, which is supposed to be the site of Ashur, the primitive capital of Assyria.

The North side of the Assyrian Transept opens into the

## EGYPTIAN GALLERIES.

The monuments in this collection constitute on the whole the most widely extended series in the range of Antiquity, ascending to at least 2000 years before the Christian æra, and closing with the Mohammadan invasion of Egypt, A.D. 640.

The larger sculptures are placed in two great Galleries with a connecting or Central Saloon, and in a Vestibule at the Northern extremity. They have been arranged, as far as possible, in chronological order, according to the succession of dynasties recorded in Manetho.

The smaller sculptures, consisting chiefly of sepulchral

tablets, have been brought, as far as practicable, into the same order as the larger monuments. These tablets record the names and titles of the deceased, who are represented upon them performing acts of homage to various divinities. Though of great value to the student of the language and history of Egypt, they do not possess such interest as to detain the general visitor. Their probable age, and the names of the persons to whom they were erected, will be seen on their labels.

The Egyptian collection has been formed partly from the donation, by King George III., of the antiquities obtained at the capitulation of Alexandria; and partly by acquisitions from the Earl of Belmore, Mr. Salt (including the discoveries of Belzoni), and M. Anastasi. It has been further enriched by presents from General Howard Vyse, the Duke of Northumberland, the Marquis of Northampton, and others.

The localities from which the sculptures have been principally derived are as follows:—The earlier sepulchral monuments are chiefly from Memphis, the capital of the most important of the more ancient dynasties, and the ruins of which are on the left bank of the Nile, opposite Cairo. Other early remains are derived from the great burial-place of Abydos. The main portion of the collection, including most of the monuments belonging to the kings of the 18th, 19th, and 20th dynasties, was obtained from the ancient city of Thebes, which became the capital of Egypt under those monarchs. This city was built on both banks of the Nile, and included the four modern localities, Karnak and Luxor on the right bank, Gourneh and Medinet-Haboo on the left. The antiquities from Alexandria and Cairo are of more uncertain origin, as some of them had been only transferred to those cities in comparatively recent times.

Most of these monuments, of whatever period, are inscribed with hieroglyphics, a form of writing almost peculiar to the Egyptians. These characters are all representations of visible objects, and are generally executed with great care and finish. They are employed in various ways, sometimes *symbolically*, to indicate the object represented, or the quality for which an object is remarkable: at other times *alphabetically*, to express the sound of the initial letter of the Egyptian name.



## SOUTHERN GALLERY.

The visitor on entering this Gallery approaches the most recent of the antiquities of Egypt, the first recess on each side being occupied by monuments of the Roman dominion in that country, a period which commenced with the capture of Alexandria by Augustus, B.C. 30, and extended to the Mohammadan invasion, A.D. 640.

In the second compartment are placed the remains of the Ptolemaic or Greek period, introduced by the conquests of Alexander the Great, and the accession of Ptolemy Soter to the throne of Egypt in B.C. 323. In the centre of the room is placed the celebrated Rosetta stone; it is a tablet of black basalt, having three inscriptions, two of them in the Egyptian language, but in two different characters (Hieroglyphic and Enchorial), the third in Greek. The inscriptions are to the same purport in each, being a decree of the priesthood at Memphis in honour of Ptolemy Epiphanes about the year B.C. 196. This stone has furnished the key to the interpretation of the Egyptian characters.

The next two compartments contain the monuments of the 30th, or last native dynasty, which succeeded in expelling the Persians from Egypt. The principal sculptures are:—A slab of green basalt, on which is represented King Nectanebo II. (B.C. 360–340), making offerings to a deity; from *Alexandria*.—The sarcophagus of King Nectanebo I. (B.C. 387–369), formerly described as that of Alexander the Great, on the exterior of which are representations of the sun passing through the heavens in his boat, and on the interior various divinities; *Alexandria*.—Sarcophagus of Naskatu, a Memphite priest, covered with inscriptions; *Memphis*.—Two obelisks erected by King Nectanebo I. before the Temple of Thoth; *Cairo*.

The two following compartments contain the remains of the 26th dynasty, which commenced under Psammetichus I., and was conspicuous for its encouragement of art, and for the extensive employment of Greeks in its service. It terminated at the conquest of Egypt by the Persians under Cambyses, B.C. 545. The principal objects are:—The granite sarcophagus of Hapimen, a royal scribe; *Cairo*.—The elaborately-worked sarcophagus of the Queen of Amasis II. (B.C. 538–527); *Thebes*.—A slab of basalt, on which is represented Psammetichus I., making offerings; *Alexandria*.—A basalt kneeling figure of a public functionary, named Uah-pa-het; *Natron Lakes*.

In the next recess are monuments of the 22nd dynasty, which is supposed to have been of foreign extraction. Among its monarchs was Sheshonk I., the Shishak of Scripture, who plundered Jerusalem. The name of this king occurs on two figures of the goddess Pasht (Bubastis), from *Karnak*.—Near these is a statue of the god Hapi, or the Nile, dedicated by King Sheshonk II.

The other objects in this compartment are of uncertain date; in the centre is a large scarabæus, the symbol of Cheper (the Creator), which had been removed to Constantinople under the Byzantine Emperors.

The remainder of this Gallery, and the whole of the Central Saloon, are filled with the monuments of the 19th dynasty, a race of kings of

great power, during whose dominion the Egyptians conquered Phœnicia, and by whom extensive edifices were erected at Thebes.

In the last compartment is a finely sculptured group in sandstone, of a male and female figure seated; and a statue of King Seti Menephtah II. on a throne, with a ram's head on his knees, from *Karnak*.

### CENTRAL SALOON.

The principal part of the monuments in this room are of the age of King Rameses II., the Sesostris of the Greeks, and the greatest monarch of the 19th dynasty. Between the columns on the left is a colossal fist in red granite, from one of the statues which stood before the great Temple of Phtah at *Memphis*. On the left are two colossal heads, the first a cast from a statue of Rameses at Mitraheny, the other a granite head and shoulders from the building called the Memnonium, at *Thebes*.—The remaining sculptures represent chiefly the king and his officers.—Between the columns, at the entrance to the Northern Gallery, are, on one side, a granite statue of Rameses II., erected by King Menephtah, from *Karnak*; and on the other, a wooden statue of King Sethos I.

### NORTHERN GALLERY.

The larger sculptures in the Northern Gallery belong to the 18th dynasty, during whose rule Egypt was in a state of great prosperity. It commenced with the expulsion of the Hyksos, or Shepherd Kings, from Lower Egypt, and its monarchs extended their conquests into Æthiopia and Asia, and built great edifices at Thebes. The close of this dynasty was troubled by disturbances, caused by a heresy in the Egyptian religion, called that of the Disk-worshippers, which has left its traces on several monuments in the collection. The principal sculptures, proceeding Northwards, are as follows:—Two statues in black granite of King Horus, one representing him under the protection of the god Amen-ra.—Two red granite lions, one having upon it the name of King Amenophis III., the other that of one of his successors, as well as the name of an Æthiopian monarch; from *Mount Barkal* in Nubia.—The head of a colossal ram, from an avenue of ram-headed sphinxes, which led to a gateway built by King Horus at *Karnak*.—Two seated statues in black granite of King Amenophis III.; *Thebes*.—A sandstone tablet recording the passage of Amenophis III. into Æthiopia, the extent of his conquests, and the number of the prisoners and slain; *Scameh*.—A column, with a capital in the form of lotus buds, inscribed with the names of Amenophis III. and two later kings; *Cairo*.—Two colossal heads, representing Amenophis III., found near the statue called the "Vocal Memnon," at *Thebes*.—Several statues of the cat-headed goddess Pasht (Bubastis), inscribed with the name of the same monarch; *Karnak*.—A black granite sculpture representing a boat in which is seated Queen Mautemua, wife of

Thothmes IV., and mother of Amenophis III.—In the centre of the Gallery is a colossal head of King Thothmes III., discovered by Belzoni near the granite sanctuary at *Karnak*: near the head is the arm of the same figure.—A *stele* or monument sculptured on four sides; upon it is represented in bas-relief King Thothmes III., supported by the god Muntra and the goddess Athor; *Karnak*.—Small limestone statue of the prince Anebni, dedicated by Thothmes III.—In the central recess of the East side of the Gallery is fixed the tablet of Abydos, an inscription of great value in determining the names and succession of the kings of various dynasties. It appears originally to have commemorated an offering made by Rameses II. to his predecessors on the throne of Egypt; and was discovered by Mr. W. Bankes, in a chamber of the temple of Abydos, in 1818. In the same part of the Gallery are placed some fine specimens of Egyptian painting, representing banqueting scenes, fowling, and other subjects of ordinary Egyptian life.

### NORTHERN VESTIBULE.

In this apartment are placed monuments of the first twelve dynasties of Egyptian monarchs. Though small in size, they have considerable interest, being the most ancient sculptures preserved in the Museum; and they show that art had made great progress in the early times to which they belong. The sculptures are principally of the 4th and 12th dynasties.

The 4th was distinguished by the high civilization that prevailed in Egypt during its rule. Its monarchs conquered Arabia, and built the pyramids as royal sepulchres. Among the monuments may be noticed some of the casing-stones of the pyramids, and a coloured statue found in a tomb at *Gizeh*.

The 12th dynasty excavated the Mœris Lake, built the Labyrinth, the city of Abydos, and the fortress of Semneh, and conquered Nubia or Æthiopia. Of this dynasty is a mutilated statue of King An, dedicated by King Osortesen I.

Over the East doorway is a plaster cast from the head of the most Northern colossal statue of Rameses II. at Ibsamboul, placed here owing to the want of space in the Central Saloon.

### NORTH-WEST STAIRCASE.

On the staircase are placed Egyptian Papyri, which are documents of various character, inscribed on rolls formed of slices of the papyrus plant. They show the three forms of writing in use among the Egyptians:—1. The *Hieroglyphic*, in which all the characters, or figures, are separately and distinctly defined. 2. The *Hieratic*, in which the same characters are represented in what may be termed a running hand.



3. The *Demotic*, or *Enchorial*, a still more cursive form, in which the language of the common people was written ; it was principally employed in civil transactions during the Ptolemaic period, and continued in use to the 3rd or 4th century of our æra.

The papyri exhibited present chiefly portions and extracts from the Ritual of the Dead, the small pictures in them referring to the subjects of the various chapters.

At the top of the staircase is the

### EGYPTIAN ANTEROOM.

On the walls are placed casts from sculptured and coloured bas-reliefs in Egypt, painted in imitation of the originals. The principal are as follows :—

Bas-relief from the North wall of the great edifice at Karnak, representing the victories of King Seti Menephtah I. over the Tahennu, a people who dwelt to the North of Egypt.—Bas-reliefs taken from the tombs of Seti I., Menephtah, Seti II., and other kings of the 19th dynasty, in the Biban-el-Molook, or valley of the tombs of the kings, at Thebes.—Bas-reliefs from several portions of a fallen obelisk of red granite at Karnak.

To the right, or South side, is the

### FIRST EGYPTIAN ROOM.

In this, and in part of the next room, are placed the smaller antiquities of Egypt. Most of these have been discovered in tombs, and owe their remarkable preservation to the peculiar dryness of the climate of the country. They have been acquired mainly by purchases from the collections of M. Anastasi, Mr. Salt, Mr. Sams, and Mr. Lane, and by donations from the Duke of Northumberland, Sir Gardner Wilkinson, and other travellers in Egypt. The objects may be divided into three principal sections :—

1. Those relating to the religion of the Egyptians, such as representations of divinities and sacred animals.
2. Those relating to their civil and domestic life.
3. Those relating to their death and burial.

## I. RELIGIOUS SECTION.

The Egyptian Pantheon, which was very complex, comprehended a large number of divinities, of which the most important were connected with the sun in his annual or diurnal course, and the lesser were his attendant satellites. The relative importance of the divinities depended in some measure on the power and wealth of the cities in which they were principally worshipped, each city having a distinct group, formed of the local god, his wife, and child, with occasionally a fourth divinity added. In the representations of the deities, their heads are generally exchanged for those of the animals sacred to them.

The figures in Cases 1-11 are arranged simply as illustrations of mythology, and without reference to their original purpose. Those which are of wood and stone were found generally in tombs and temples; those of bronze and silver were principally votive; whilst the small figures in gold, porcelain, and other materials, were worn as amulets, employed in private worship, or attached to the mummies of the dead. The upper row in the Cases contains generally the figures in stone or wood, the next those in bronze, the third those in porcelain, and in the lowest are the larger figures in various materials. Among them may be noticed the following:—

Cases 1, 2. Amenra (*Jupiter*), the principal deity of Thebes; Ra (*The Sun*), the god worshipped at Heliopolis, or On; Phtah (*Vulcan*), the divinity of Memphis; the goddess Pasht (*Bubastis*); and Neith (*Minerva*), the goddess of Sais, whence her worship is supposed to have been carried to Athens. Cases 3-5. Thoth (*Mercury*), the god of knowledge, and the reputed inventor of writing; Osiris, the judge of the dead, his wife Isis, and their son Horus, three divinities who were worshipped throughout Egypt. Case 7. Anubis, the god of Embalming, and Typhon, the impersonation of the principle of Evil.

Cases 8-11. Representations of animals sacred to the various divinities, and which were also themselves worshipped, though the reverence paid to some of them varied considerably in different parts of the country. In Cases 8, 9, are quadrupeds, such as the Bull Apis, the jackal of Anubis, the cat of Pasht, the cynocephalus, the lion, the goat, &c. In Cases 10, 11, birds, fishes, and reptiles, such as the hawk of Horus, the ibis of Thoth, fishes of various kinds, the crocodiles of Sebak, and the cobra di capello snake, or uræus. There are also sacred emblems, such as those of Life, Stability, &c.

## II. CIVIL SECTION.

The remains of Egyptian dress, personal ornaments, and articles of domestic use, show the high civilization and even luxury to which the people had attained.

In Cases 12, 13, are figures of kings and public functionaries, in stone, bronze, ivory, or wood, principally found in tombs. The most remarkable are two very ancient stone figures from Abydos, and a fine statuette in bronze, inlaid with silver, representing a king.

Cases 14-19 contain household furniture, consisting of wooden head-rests, which served as pillows; chairs with plaited cord bottoms; stools, and folding seats; some of them formed of ebony inlaid with ivory. With these is a model of a peasant's house, with granaries, in the court of which is seen a woman making bread; the wig of an Egyptian lady of rank, and the box for holding it; a three-legged table, and other objects of a similar nature.

Cases 20, 21. Articles of dress and appliances for the toilet. Shelf 1. A linen shirt, and a box to hold clothes. Shelf 2. Combs, hair-pins, ointment-vases, and apparatus for painting the eyes with *Stibium*. Shelves 3, 4. Bronze mirrors, and a collection of shoes and sandals.

Cases 22-32. Vases of various kinds. In Cases 22, 23. Vases made of oriental alabaster (arragonite), some of them inscribed with the names of very early kings, such as Hunnas of the 5th dynasty, and Nephhercheres. There is also a vase, on which is engraved an inscription stating its capacity. Cases 24, 25. Shelf 1. Vessels in alabaster and serpentine. Shelves 2 and 3. Glazed steatite, porcelain, and glass; some of the latter, which is of brilliant colours, resembles the specimens discovered in Greece and Italy. Shelf 4. Earthenware of various kinds. Cases 26-29. Earthenware vases, some of them with polychrome painting. Cases 30-32. Vases in red terracotta; one of them in the form of a woman playing on a guitar.

Cases 33-35. On the two upper shelves, bronze vases of various kinds, the most remarkable being buckets, covered with hieroglyphics, probably for offering water in the temples; and the model of a stand with a set of bronze vases upon it: also two fragments of bronze inscribed with the name of Tirhakab, king of Egypt. Shelf 3. Articles of food, such as fruit and grain. On a stand are two trussed ducks and some bread. Shelf 4. Agricultural implements, such as a hoe and sickle, both of iron, and the wooden steps of a ladder.

Cases 36, 37. Armour and weapons for war, and implements for the chase. Among them are several highly ornamented bronze axes; with daggers, spear-heads, and arrows tipped with flint.

Case 39. Artistic and writing implements, such as the palette for holding colour, and ink-pots, and moulds for making terracotta ornaments.

Cases 40-45. Various objects of domestic use. Cases 40, 41. Shelves 2 and 3. Boxes, and spoons; some of the former made of ebony and



ivory, and the latter much carved and ornamented. In Cases 42, 43, on Shelves 1 and 4, are baskets. Shelf 2. Tools chiefly made of bronze, and models of similar instruments, several of them inscribed with the name of Thothmes III., a king of the 18th dynasty. Shelf 3. Carvings in bone, ivory, and wood. Cases 44, 45. On Shelf 1, baskets made of palm-leaves. Shelf 2. Musical instruments, including harps, flutes, cymbals, and *sistra*; games and playthings, such as draughtsmen, dice, dolls, and balls. Shelves 3, 4. Linen cloths of various colours.

### III. SEPULCHRAL SECTION.

The preparations for embalming the dead, and ceremonies at funerals, were looked upon as matters of great importance by the Egyptians, and large sums of money were spent upon the sepulchral rites. There were several modes of preparing the mummies, varying not only at different periods, but also with the rank and wealth of the person to be interred. The more costly process was as follows:—The brain having been extracted, and the viscera removed through an opening cut in the left side with a stone, the body was, in earlier times, prepared with salt and wax, in later times, steeped or boiled in bitumen; then wrapped round with bands of linen, sometimes 700 yards in length; various amulets being placed in different parts, and the whole covered with a linen shroud and sometimes decorated with a network of porcelain bugles. It was then enclosed in a thin case formed of canvas, thickened with a coating of stucco, on which were painted figures of divinities and emblems of various kinds, as well as the name and titles of the deceased, and portions of the Ritual of the Dead. The whole was then enclosed in a wooden coffin, and sometimes deposited in a stone sarcophagus.

Cases 46–51. Various mummies and coffins; the most remarkable being part of the mummy-shaped coffin of King Menkare, the Mycerinus of the Greeks, builder of the Third Pyramid. This is not only the oldest coffin in the collection, but one of the earliest inscribed monuments of Egypt. Near it is part of a body, supposed to be that of the king, found in the same pyramid. A small Græco-Egyptian mummy of a child from Thebes; on the external wrapper is painted a representation of the deceased.

The principal mummies and their coffins are placed in two rows in the central part of the room. The most important are the following:—

Case 67. Mummy and coffin of Katbti, a priestess of Amen-ra.

Case 68. Coffin of Har, incense-bearer of the temple of Num-ra.

Case 69. Very fine mummy of Harnetatf, high priest of Amoun; on the soles of the sandals are represented Asiatic captives. The outer case is in the corner of the room, in Case 27.

Case 70. Mummy of Haremhbai, richly painted, and the coffin of Enantef, a king anterior to the 12th dynasty.

Case 72. Coffin of Tenamen, an incense-bearer at Thebes. The face is of dark wood, inlaid with glass.

Case 74. Mummy of a Græco-Egyptian youth, whose portrait is placed on the head, painted on cedar.

Case 75. Mummy and coffin of a Græco-Egyptian girl, named Tphous, daughter of Heraclius Soter; on the coffin is a Greek inscription, recording her death in the 11th year of Hadrian, A.D. 127.

Case 103. Sarcophagus of Mentuhetp, a functionary of about the 11th dynasty.

Case 104. Sarcophagus of Amam, an officer under one of the older dynasties.

Cases (A) 77 and (B) 90, in the centre of the room. Two large wooden coffins of the Roman period. One is that of Cleopatra, of the family of Soter, the other of Soter himself, an archon of Thebes, in the reign of Trajan.

In the upper part of the Cases just mentioned are placed personal ornaments, amulets, and scarabæi, chiefly found with the mummies. The scarabæi frequently bear the names of kings, showing probably that the persons interred had borne office under those monarchs. The most remarkable are some small scarabæi in Division 95, with the names of Cheops and Kephren, the kings who built the Great and the Second pyramids, and several large scarabæi of the reign of Amenophis III.; one (No. 4095) recording the number of lions slain by the king within a certain period; the other (No. 4096) relating to his marriage with Queen Taia, and the extent of his dominions.

Returning to the Wall Cases, we find mummies of sacred animals as follows:—Cases 52, 53. Mummies of cynocephali, jackals, and cats. Cases 54, 55. Mummies of sacred bulls and of rams, the heads and principal bones only embalmed. Cases 56, 57. Mummies of the Ibis, sacred to Thoth; and specimens of the conical, covered pots in which they were deposited. Case 58. Mummies of crocodiles, emblems of Sebak, and of snakes, emblems of Isis. Case 60. Mummies of snakes and fish.

In Cases 61, 62, are specimens of unburnt bricks, some stamped with the names of kings of the 18th and 19th dynasties.

Cases 63, 64. Fragments of mummy-coffins and sepulchral tablets.

Over the Cases on the East and West sides of the room are placed casts from sculptured and painted bas-reliefs at the entrance of the small temple of Beit-Oually in Nubia. One represents the victories of Rameses II. over the Æthiopians; the other the victories of the same monarch over some Asiatic nations.

## SECOND EGYPTIAN ROOM.

The Egyptian antiquities are placed on the East side, the other being at present occupied by the Temple Collection.

## EGYPTIAN ANTIQUITIES.

These are further illustrations of the Sepulchral remains of Egypt, of which the larger portion is placed in the First Egyptian Room.

Cases 1-11. Sepulchral tablets of painted wood, small models of sarcophagi and mummies, and boxes for holding sepulchral figures, as well as a large collection of the figures themselves. The latter are formed of wood, alabaster, stone, or porcelain, and have inscribed upon them a religious formula, as well as the name and titles of the deceased. They are supposed to have been deposited in the tombs by the relatives of the person who was buried. Some of the figures in the collection bear the names of Seti I., Amenophis III., and other kings.

Cases 12, 13. Sets of sepulchral vases, four in number, in which were placed the viscera of the dead, divided into four portions, and separately embalmed; their covers are heads of the Genii of the Amenti, to whom the respective portions were dedicated.

Cases 14-19. Wooden coffins, elaborately ornamented, and a wooden case painted black and yellow, which contained a set of vases.

Cases 20-23. Sepulchral vases similar to those already described.

Cases 24-30. Wooden figures of Ptah Sochari, and Osiris Pethempamentes, made hollow to enclose the papyri deposited in the tombs.

Cases 31, 32. Cones or bricks stamped with inscriptions, containing the names of functionaries, and which probably formed part of the construction of the tombs. A hydria, or water-vase of alabaster, from Alexandria, lamps and vases.

In Table Case A are various objects in porcelain and glass, principally from the coverings of mummies, and inscriptions traced on stone, porcelain, and wood.

In Table Case B are portions of the outer coverings of mummies, and objects of the Greek and Roman period: amongst them are portraits of females, and receipts for taxes.

In Table Case C, bronze plates, with Himyaritic inscriptions, from Arabia; some objects from Bethlehem and Mount Sinai; and Gnostic amulets.

In the detached Cases 101, 102 are sepulchral boxes, tablets, and models of boats.

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## TEMPLE COLLECTION.

On the West side is placed a collection of antiquities, bequeathed to the British Museum in 1856 by the late Hon. Sir William Temple, K.C.B., Her Majesty's Minister



at the Neapolitan Court. The collection is exhibited as a separate series, both as a more fitting acknowledgment of so munificent a bequest, and as giving in this form a more complete idea of the general character of the monuments obtained from a district of much importance in ancient times. A few of the objects were discovered in the Southern portion of ancient Etruria; but the majority belong to that large region of Lower Italy which, prior to the Roman dominion, was extensively colonized and highly cultivated by the Greeks, and thence received the name of Magna Græcia. They comprehend, therefore, specimens of the arts of three different races, the Etruscans, Greeks and Romans. The most interesting articles are placed on tables, constructed for the purpose, in the middle of the room; the remainder are distributed in Wall Cases under the heads of sculpture, terracottas, painted vases, glass, metal-work, frescoes, &c. The present description commences from the South end of the room.

The first table is supported at each end by a marble *trapezophoron*: one of which represents a Cupid holding a bird. At the South side of the table is a group, in alto-relievo, of two Satyrs, which, like the *trapezophora*, is of Græco-Roman style. On the North side is a Roman mosaic, representing a Sacrifice: in common with most of the mosaics in this collection, it has been considerably restored. In the centre of the table, upon another mosaic, stands a Greek terracotta *crater*, or vase for mixing wine, of unusual magnitude, and decorated on the neck with a bas-relief of a chariot-race; at each end of the table is a Roman alabaster vase or urn, one of which has a very beautifully sculptured handle; and at the angles are four Greek *rhytons*, or drinking horns, one of which, in the form of a mule's head, is remarkable for its good workmanship and perfect preservation.

The central, or principal table, is also supported at the ends by *trapezophora*, and adorned, on the top and on each side, with mosaics. The mosaic in front is divided into eight compartments, each representing a fish. In the middle of the table is a magnificent *crater*, which is the largest Greek painted vase in the British Museum; at the sides of the table are four smaller vases, or vessels, of painted or glazed earthenware, remarkable either for beauty of design, or rarity of fabric; and at each end stands a painted vase, of unusual but graceful form.

The third, or most Northern, table is constructed similarly to the first, but is supported at one end by a small Caryatid figure, at the other by an ornamental pilaster. The South side is decorated with another mosaic representing a Sacrifice, and the North with a bas-

relief, exhibiting a figure of Ceres receiving offerings. On the top of the table is a plain mosaic, in the middle of which is placed a Greek bronze cuirass, of remarkably fine workmanship; and at the ends and sides are six objects in bronze, of which the statue of the Infant Bacchus is remarkable for its beauty, the two horses' muzzles for their rarity, and one of the helmets for the unusual preservation of its details and fittings. On the small table between these two last, stands a Roman marble cinerary urn.

The description proceeds next to the objects arranged round the sides of the room, of which the most remarkable only can be here enumerated.

Beside the South door is a bust of a laughing child.

The adjoining Cases, numbered 33-36, contain minor specimens of sculpture, architectural or decorative fragments, and inscriptions. They belong chiefly to the Roman period, though some are of the class described as Græco-Roman. Their subjects, and, whenever known, their sites of discovery, are indicated on their pedestals, or on the labels attached. In Case 33 is an inscription on a monumental tablet, which, though imperfect, is of considerable interest, having originally, as it is believed, been dedicated to the memory of Vitruvius, the celebrated writer on architecture. On the upper shelves of Cases 35, 36, is a collection of terracotta masks, and antefixal ornaments, designed to cover the ends of the roof-tiles over the external cornice of a building. In Case 35 are two Roman weights, and in Case 36 a mutilated, but very beautiful, bas-relief of Ariadne sleeping on a rock.

Case 37. Roman terracotta lamps, variously ornamented in bas-relief.

Cases 38, 39. Small terracotta figures and fragments, chiefly of Italo-Greek workmanship; amongst them, a jointed doll; and underneath, two Etruscan cinerary urns, partially coloured, with bas-reliefs in front, and recumbent figures of the dead upon their covers.

Cases 40, 41. Terracotta vases, either perfectly plain, or with unglazed colours. They are in some instances Greek, in others Roman, and designed for various uses. The most curious and elegant are the Greek *rhytons*, or drinking horns, terminating in animals' heads, the mouths of which were pierced for the passage of the wine.

Cases 42, 43. A shelf of the red Roman earthenware with moulded reliefs, sometimes called Samian, sometimes Aretine. Another shelf, with small vases and lamps covered with a vitreous glaze of some rarity.

In the lower half of these Cases commences the series of Greek painted fictile vases, which is continued through the next eight Cases (44-51). The whole have been arranged under a chronological classification, exhibiting the progress of the ceramic art through five periods, which are approximately defined by the dates inscribed on the labels within the Cases. The first period, on the middle shelf in Cases 42, 43, is that of the style commonly termed Phœnician, or Nolano-Egyptian, in which animals and human figures are rudely painted in dark brown or maroon colours, on a pale yellow clay. On

the two lower shelves of the same Cases are the vases of the second, or archaic Greek period, formed of pale or reddish clay, and decorated with black glazed figures of severe and, in some cases, rather grotesque design, with incised outlines. Cases 44, 45, contain the vases of the third, or finest period, with the figures left to the natural red of the clay, and the backgrounds painted black. The most beautiful specimens, which were discovered at Nola, are remarkable for the brilliant preservation of their glaze. Cases 46, 47. The vases of the fourth period, in the upper part of these Cases, though rich and generally elegant in design, are inferior in execution to those of the preceding class. In the lower part of these Cases, and in the whole of Cases 48-51, are vases chiefly of the fifth period, which exhibits the gradual decline of the art, both in the coarseness of its designs, and inferiority of its mechanical fabric, till about the time of the Roman conquest of Greece, when it appears altogether to have ceased. The earlier vases are generally placed on the upper shelves, the later on those below.

Cases 52, 53, contain specimens of glass, many of which were manufactured in Egypt or Phœnicia, and imported into Magna Græcia, both in the Greek and Roman periods. Other specimens are purely of Roman fabric, amongst which may be remarked six small figures of birds, and a cinerary urn in the form of a child's cradle.

Cases 54, 55. On the middle shelf is a small collection of gold and silver articles, including a fine gold necklace from an Etruscan tomb, and some elegant silver vases. With these are placed several Roman gems, chiefly set in rings.

The upper part of these Cases contains bronze bells and vases, and six helmets from Magna Græcia and Etruria; the lower part has a collection of armour and of culinary implements.

Cases 56, 57. In the upper part are small bronze figures, many of them ancient copies from celebrated statues; in the lower are personal ornaments, small altars, and sacrificial instruments. Case 58 contains bronze vessels, articles of furniture, &c. Case 59, candelabra, lanterns, and lamps, with a shelf occupied by vase-handles, another by weights, and the lower part by jets for fountains, and other objects. On the middle shelf of Cases 60, 61, are some bronze mirrors, such as were used by Etruscan ladies, the exterior, or convex side, being highly polished, and the interior, or concave, engraved with figures in outline. With these are Roman stamps, and a few minor objects. At the bottom of the same Cases are locks, keys, &c.

On two shelves in Cases 60, 61, are collections of miscellaneous objects in iron and lead.

Against the adjoining pilaster is a *trapezophoron*, in form of a seated female panther, and on the table above, a bust in *giulio antico*, of uncertain title, perhaps Saturn, veiled.

Cases 62, 63, 64, contain miscellaneous objects. On the upper shelves are four fine remains of Roman fresco-painting from the walls of houses at Pompeii, which were added to the Temple Collection by the special direction of the King of the Two Sicilies, to whom, by the law of Naples, they rightly belonged. On the highest shelf are also



some rare and curious pieces of amber, carved in an archaic style. On the next shelf several minor specimens of fresco, some ivory and bone carvings, and some calcined remains of corn and fruit, exhumed at Pompeii. Below these a collection of red earthenware vases from Sicily, of a late period; a variety of small glazed terracotta vases and figures.

### FIRST VASE ROOM.

This room and part of the next contain the collection of Painted Fictile Vases which have been discovered in tombs in Italy, Greece, the adjacent islands, and other parts of the Mediterranean, and which for the most part are of Greek fabric, though the obsolete name Etruscan is still erroneously applied to them in England. Nearly all of them have been found in tombs, but they are very similar in form and fabric to those actually used in the ancient Greek household. The subjects with which these vases are decorated are for the most part derived from the divine or heroic legends of the Greeks, while others seem to be simply scenes from real life.

The Collection in this room is arranged for the most part in chronological order, commencing with the North and East sides of the room. The approximate dates under which the successive classes may be arranged are given on the large labels over the Wall Cases. The finest specimens are placed in or upon the detached Cases.

Class I. Cases 1-12. Table Case B. Vases of Archaic style (B.C. 700—B.C. 500).

Cases 1-5. Vases of the earliest style, chiefly from Athens, Corinth, and Melos, ornamented with geometrical patterns, perhaps imitations of wickerwork.

Cases 6-10. Vases from Camirus, in Rhodes, with geometrical patterns, or with men and animals, many of which belong to the style called by some Nolan-Egyptian, by others Phœnician, and which may perhaps be most correctly described as Greco-Phœnician.

Table Case B. Terracotta coffin and select vases from Camirus.

Cases 11, 12. Vases of the Archaic style from Italy.

Class II. Cases 13-30. Detached Cases C, G, K, and O. Vases, chiefly from Italy, of the transition period (B.C. 500—B.C. 440), in which greater mastery in drawing the figure is attained and more complicated groups are attempted. The figures are drawn in black, white, and crimson, on a red ground.

The finest specimens of this style are the *Hydriæ*, or water-jugs (Cases 17-24, Shelves 3, 4), and the *Amphoræ* in the detached Cases on the East side of the room. The subjects relate chiefly to heroic

myths and personages, and especially those of the Homeric poems and Epic Cycle generally.

Case O, on the West side of the room, contains Panathenæic Amphoræ of this class, with inscriptions which show that they were given as prizes in the games at Athens.

Class III. Cases 31-35, 41-54, and Cases L, M, N. Vases of the finest period (B.C. 440—B.C. 330), with red figures on a black ground. They are unrivalled for beauty of shape and drawing, and the lustre of the black varnish. The vases on Table Case I., of the same period, are especially worthy of observation.

Cases 31-35. Vases from Camirus, Rhodes.

Cases 36-40 interrupt the chronological sequence. They contain a number of vases of various styles from Sicily, of which the most remarkable are the *lékythi*, painted in several colours on a white or cream-coloured ground (Case 36). On the floor of these Cases are vases from Camirus, belonging to Class II.

Cases 41-45. Vases, chiefly from Nola, in Campania.

Cases 55-60 contain the later Athenian vases, the finest of which are the vases belonging to Class III. (Cases 55, 56, Shelf 4), and the *lékythi*, with polychrome figures on a white ground. (Cases 57, 58.)

Table Case A contains black and red ware of Etruscan origin, most of which may be attributed to the Archaic period.

In Table Cases H and I are a number of vases and other antiquities recently discovered at Camirus. They are not yet arranged.

In the Guide to the First Vase Room, now on sale in this Room, will be found a description of the vases most remarkable either for interest of subject or beauty of style. These select specimens are distinguished in the Collection by blue labels corresponding with the numbers in the Guide.

Over Cases 41-60 are painted fac-similes, by Signor Campanari, of the walls of an Etruscan tomb at Tarquinii, decorated with a double frieze; in the lower are represented dances and entertainments, and in the upper, athletic games, as leaping, running, chariot-racing, hurling the *discus*, boxing, and the armed course; above is a large vase and two persons at an entertainment. The side of entrance of this tomb, decorated with two panthers, is represented above the Cases 31-40, and the roof, which is chequered, over Cases 11-30.

## SECOND VASE ROOM.

This room contains the later Greek Fictile Vases, the Greek and Roman Terracottas, the Greek and Roman Glass and Porcelain, the Greek and Roman Mural Paintings, and a number of miscellaneous antiquities in ivory, bone, wood, alabaster, stucco, and other materials.

The Greek Fictile Vases are arranged in Wall Cases on the North and Eastern sides of the room, and in the detached Cases in the centre. The subjects represented mostly relate to Dionysiac festivals, to Venus and Cupid, or to funeral offerings.

The figures are painted in red or white on a black ground, details being sometimes picked out in crimson or yellow. The black varnish is less brilliant than in the earlier styles, and the shapes of the vases less elegant; the ornaments are more florid, the composition more pretentious and elaborate, and the drawing mannered and often careless. These characteristics mark the decline of the art of vase-painting.

Cases 24 to 31 contain the black modelled ware, among which will be found many shapes imitated from vases in metal.

Cases 32-41, and 44, 45, at the South end of the room, contain a series of Græco-Roman terracotta reliefs, chiefly from the Townley Collection. They originally decorated the walls of Roman buildings, and present an interesting variety of mythological subjects. The figures are generally well composed and modelled.

Cases 42, 43, contain several large terracotta figures of the same Græco-Roman style. On the West side of the room, Cases 46-51 contain terracottas from Athens, Rhodes, Melos, the Cyrenaica, Sicily, Sardinia, Cyprus, and other parts of the Greek world. The most archaic specimens, chiefly from Athens and from Camirus in Rhodes, are arranged in Cases 46, 47. The greater part of the terracottas from Cases 46-51 are probably of Greek origin. Some of the most archaic from Camirus, Cyprus, and Sardinia, may be Phœnician. The terracottas from Cases 52-59 are principally from Magna Græcia.

In these Cases are some fine specimens of drinking cups or rhytons, and vases moulded in the form of human heads, or other fantastic or extravagant shapes.

In Cases 60-65, 68-72, and 1-23, the Blacas Collection is provisionally arranged. A separate account of this Collection is now published.

The Table Cases in the centre of the room are not yet arranged.

### BRONZE ROOM.

This room contains the collection of Greek, Etruscan, and Roman Bronzes, with the exception of such as have been found in Great Britain, which are placed in the British Room. It is chiefly composed of the Sloane, Hamilton, Townley, and



Payne Knight collections, to which additions have been made from time to time by presentation or purchase.

The Collection is arranged as far as possible in chronological order. The bronzes in the Western half of the room are chiefly Etruscan, and of the Archaic period. Those in the Eastern half are mostly Roman, or Græco-Roman.

Cases 1-4 contain a number of bronzes of the Archaic period, principally from Etruria, among which may be particularly noticed a Hercules from the lake of Falterona, a recumbent male figure, probably from an Etruscan bronze sarcophagus, and a mirror from Attica, the handle of which is formed by a figure of Venus.

Cases 5-11 contain a number of bronzes, fictile vases, a marble figure, and other antiquities, from Polledrara, near Vulci.

Among these antiquities are several porcelain vases, ornamented with pseudo-Egyptian hieroglyphics, which are probably imported into Etruria through Phœnician commerce. In Case 9 an Etruscan figure found at Sessa on the Volturno in Italy, a most ancient and interesting specimen of casting in bronze, is temporarily placed.

Cases 12-19 contain a number of pieces of Etruscan, Greek, and Roman armour, and some Etruscan candelabra.

Cases 20-23 contain two Etruscan tripods, and some Greek and Etruscan vases and handles of vases. Among these may be particularly noticed a krater and an amphora, recently purchased at the Pourtalés sale, which are placed on the upper shelf, Cases 21-23.

Cases 24-30 contain Greek and Etruscan vases, engraved cistæ, mirror handles, and other objects. In Case 30 is an Etruscan male figure, found at Falterona.

Cases 31-53 contain figures mostly Roman or Græco-Roman. A selection of the finest of these occupy Cases 42-49, in the centre of the East side of the room, the remainder are arranged in mythological classes. Among the select bronzes in the central Cases may be particularly noticed, a male head found at Cyrene, and a head probably of a Greek poet, both life size; two Jupiters, found at Paramythia, and a Jupiter found in Hungary, formerly in the Pourtalés Collection.

Cases 54-60 contain Roman candelabra, lamps, and other antiquities, among which may be particularly mentioned a bronze lamp found at Paris, ornamented with dolphins, lions, and satyric masks (Case 56), and a Roman seat inlaid with silver.

On the Table Cases B and E are the following select bronzes: Case B. An Etruscan bronze vase with an engraved frieze round the upper part of the body, and with figures of Amazons round the rim; an Apollo; a Bacchus; the celebrated Mercury, from the Payne Knight Collection, found in France; the helmet, from Olympia, dedicated by Hiero, the first king of Syracuse, after his naval victory over the Etruscans, B.C. 472; and two other helmets, one from Cannæ, the other dedicated at Olympia by the Argives. On Case E is a Hercules, found

at Byblus, in Phœnicia ; an Apollo from Paramythia ; a Hercules, found at Bavay, in France, and a silver vase of the late Roman period, also found in France, and ornamented in low relief with the Seasons.

Case D contains a number of select bronzes, among which may be noticed the bronzes of Siris, two shoulder-pieces of Greek armour found in Magna Græcia, and ornamented with groups in relief in the finest style ; a bronze mirror in a highly ornamented frame of unusual size, found at Locri ; a mirror, on which is engraved the meeting of Helen and Menelaus at the taking of Troy ; a group of Boreas and Oreithyia, from a tomb in the island of Calymnos ; figures and animals in relief, embossed in silver, and forming part of the ornament of an Etruscan chariot found at Perugia ; a lamp in the form of a greyhound's head, from Nocera ; Ceres in a rustic car, from Amelia in Etruria ; a hare inscribed with a very ancient dedication to Apollo ; a bronze plate from Elis, inscribed with a treaty between two tribes, and a decree of the people of Corcyra.

Table Case C contains Etruscan mirrors, on which various mythological subjects are engraved. Case A contains armlets, fibulæ, and various personal ornaments and trappings. Case F, locks, keys, and a variety of small implements.

C. T. NEWTON.

## BRITISH AND MEDIEVAL ROOM.

This room contains three collections :—the British, consisting of Antiquities found in Great Britain and Ireland, extending from the earliest periods to the Norman Conquest, the Early Christian, and the Medieval, comprising all remains of the Middle Ages, both English and Foreign.

## BRITISH COLLECTION.

This Collection is arranged, as far as possible, in chronological order, as follows :—

Cases 1–42. British Antiquities, anterior to the Romans.

Cases 43–75. Roman Antiquities found in Britain.

Cases 76–97. Anglo-Saxon Antiquities.

## BRITISH ANTIQUITIES.

The remains of the inhabitants of the British islands, previous to the Roman invasion, embrace the *Stone*, *Bronze*, and a portion of the *Iron* period of Northern Antiquaries. They have, for convenience, been classed according to their materials,

and in the order corresponding to that of the supposed introduction of such materials into this country. With them have been placed similar remains from other countries for the purpose of illustration.

Cases 1-4. Middle Shelf (Case 1, 2). Antiquities found in the Drift Beds of England and France, chiefly flint implements of a peculiar pear-shaped form. These have been found with the remains of the mammoth, and are believed to be the oldest remains of human industry hitherto discovered. Other Shelves. Implements known as stone celts. They appear by analogous examples, still in use among nations in a savage state, to have been mounted in wooden handles, and bound round with leathern thongs, so as to form axes. These are from England, Scotland, and Ireland.

Cases 5, 6. Upper Shelves. Flint knives and arrow-heads, from England and Ireland; among them a stone celt, with the remains of its original wooden handle. Lower Shelf. Stone implements from Jersey and France.

Cases 7-10. A large collection of implements in reindeer-horn, flint, &c., from caves in the South of France, some of them from Bruniquel, near Montauban, others from Dordogne. Lower Shelf. Stone implements from foreign countries—Italy, Portugal, Germany, Denmark, India, Africa, and America.

Table Case A. A mass of breccia from the floor of a cave at Les Eyzies, Dordogne, containing flint and bone implements.

Table Case B. Antiquities discovered on the site of dwellings built on piles in the shallow parts of the Swiss lakes. They afford much information as to the arts, habits, and food of the ancient inhabitants. In the centre of the Case are models of cromlechs, or sepulchres, in Cornwall and Wales.

Cases 11, 12. Various stone implements, viz.:—Stone hammers, or axe-heads, pierced to receive a wooden shaft; they have been occasionally found with bronze weapons, and appear to be of a later date than the stone celts. Oval pebbles, which may have been sling-stones. Small sharpening stones or hones, pierced at one end for suspension. Circular pierced disks, which have been used as beads, or as whorls for the spindle.

Cases 13-25. Implements and weapons made of bronze, a mixed metal, compounded of about nine-tenths of copper to one-tenth of tin. The sites of discovery are marked on the objects themselves.

Cases 13-15. Illustrations of early British Metallurgy. Lower Shelf. Stone mullers or hammers, which have been employed in ancient copper mines to break the ore; cakes of copper and bronze; stone mould for making rough bronze celts, and casts of moulds for making bronze swords. Middle Shelf. Bronze moulds for casting celts of various forms; unfinished and imperfectly formed celts from various localities, and lumps of copper found with them.

Cases 16-20. Bronze implements, commonly called celts (from the



Latin *cellis*, a chisel), which appear to have been affixed to wooden handles. They are arranged, according to their forms, into classes.

Cases 21, 22. Middle Shelf. Blades of bronze daggers and knives, of which the handles were of wood, horn, or bone. Lower Shelf. Bronze swords, among which some fine specimens from the Thames; and ends of sword-sheaths.

Cases 23-25. Bronze shield found in the Isis, near Dorchester. Two shields found in the Thames. Bronze spear-heads, some with rivet holes, in which a wooden peg appears to have been fixed; others without rivet holes, but with loops at the side, or piercings in the blade, for thongs. Bronze trumpets from Ireland.

Cases 26-35. Early pottery found in tumuli. The larger urns have contained burnt ashes; the smaller may have been used as drinking cups at the funeral feast. The most curious urn was found in a barrow on the banks of the river Alaw, Anglesea, and is supposed to have contained the ashes of Bronwen the Fair, aunt to Caractacus, who died about A.D. 50; also urns found in Jersey, Ireland, and Scotland, the Scotch and Irish are generally more elaborately ornamented than the English. Below, Roman leaden coffins from East Ham, Essex.

In Cases 39-42 are placed various antiquities found in England, Scotland, and Ireland, chiefly of bronze, and characterized by a peculiar style of ornament, and frequently by enamel. They are probably late Celtic, of about the time of the Roman invasion of England. Among them horse-trappings and a sword found at Stanwick, in Yorkshire, during excavations made by the Duke of Northumberland, by whom they were presented; similar trappings from Polden Hill, Somersetshire, and Westhall, Suffolk.

Table Case D. On one side miscellaneous antiquities of the Bronze period, and bronze implements from foreign countries; on the other, a continuation of the series of late Celtic antiquities, among which are some remarkable shields from the Thames.

#### ROMAN ANTIQUITIES FOUND IN BRITAIN.

These differ little from the Roman remains found in other countries. Some of them were no doubt imported, but the greater part must have been made in some of the flourishing cities founded in Britain by the Romans, who were more or less masters of this country for upwards of 400 years.

Cases 47-51. Middle Shelf. Several groups of glass and earthenware vessels, discovered together in Roman tombs. On the upper and lower shelves, Roman vessels of coarse earthenware, principally employed as cinerary urns. Over the Cases, two large *amphoræ*, the necks of which have been broken off to admit urns, forming rude sarcophagi.

Cases 52, 53. Specimens of Roman earthenware, found on the site of kilns in the New Forest in which they were manufactured. They are generally "castaways," ill-made or imperfect.

Cases 54, 57. Roman pottery of various kinds. The localities in which the specimens were found are inscribed upon them as far as possible. Underneath: Roman roof, flue, and draining tiles; also two Roman coffins of lead, found near London.

Cases 58, 59. Roman lamps variously ornamented. Two specimens of earthenware with a yellow vitreous glaze. Roman red moulded ware, commonly called Samian. The finer kind, known as Aretine ware, was made chiefly at Aretium in Italy; the coarser in Germany and Eastern Gaul, and imported into England. A fragment of a mould may be seen in Case 63; and a type for impressing the mould.

Cases 60-63. Plain Samian ware, probably the ware employed for domestic purposes. The specimens are generally stamped with potters' names. Underneath: Roman *Mortaria*, or pounding-vessels.

Cases 64-75. Miscellaneous Roman Antiquities. Among them may be noticed a vase turned in Kimmeridge coal, and the waste pieces found on the site of the manufactory on the coast of Dorsetshire; clay moulds for counterfeit coins; glass vessels; brooches and other personal ornaments; bronzes, among which is a fine statue, found at Barking Hall, Suffolk. Case 70. Antiquities discovered at Ribchester, in Lancashire. On the upper shelf, a bronze head of the Emperor Hadrian, found in the Thames. Below, a Roman tomb found in the Great Park, Windsor, and presented by Her Majesty. Cases 71-75. Edicts granting privileges to some of the auxiliaries serving in Britain under Trajan and Hadrian. Votive offerings, small figures, etc.

In Table Case F are placed Roman Antiquities discovered in London, principally from the collection made by Mr. Roach Smith. They consist of statuettes, personal ornaments, implements of various kinds, such as knives, and *styli* for writing, fragments of glass and pottery, leather sandals, and other remains of the Roman occupants of London.

#### ANGLO-SAXON ANTIQUITIES.

These antiquities, which have been chiefly found in ancient cemeteries, belong for the most part to the earlier periods of the Heptarchy. They show that both burying and burning the dead were practised in England by the Saxons.

Cases 76-80. On the upper shelf are black sepulchral urns, found chiefly in Norfolk and Suffolk. On the lower shelf of these and the following Cases are tablets of antiquities discovered by Dr. Bähr in Livonia and Courland, of about the same age as the Saxon antiquities, and placed here for comparison.

Cases 81-87. Various Saxon weapons, such as swords, spear-heads, and bosses of shields. A bucket of wood with bronze mountings. A bronze bucket, which was discovered at Hexham full of coins of the kings of Northumbria.

In Table Case G are placed personal ornaments of various kinds, and a series of swords and spears discovered in the Thames. Among them a sword with a Runic alphabet.

## EARLY CHRISTIAN COLLECTION.

This is a small Collection occupying one corner of Table-Case G. The most remarkable part of it is a number of pieces of glass vases with ornaments in gold leaf, all discovered in the Catacombs of Rome. The subjects on these are chiefly from the life of our Lord, or antitypes from the Old Testament, such as Jonah, Moses striking the rock. There are also figures of St. Peter and St. Paul, and other saints connected with the Early Roman Church.

## MEDIÆVAL COLLECTION.

This Collection is arranged with reference partly to the material of which the objects are formed, partly to the use for which they were intended.

Cases 88-97. SCULPTURE AND CARVING, in various materials, but chiefly in ivory, the specimens of which are arranged, as far as practicable, in chronological order. The earlier examples are generally writing tablets or portions of the bindings of books. Those of the 13th, 14th, and 15th centuries are principally tablets for devotional purposes. The later carvings are of a miscellaneous character.

In Table Case H are placed other specimens of Sculpture: on one side are early writing tablets or diptychs, mirror-cases, combs, chessmen and draughtsmen: on the other are vases of rock crystal and jasper, and medallions in bronze and silver.

Cases 98-100. PAINTINGS. Portions of the frescoes in St. Stephen's Chapel, Westminster, executed in the latter half of the 14th century.

Cases 101-107. Various miscellaneous objects, including a large collection of mediæval leather work, chiefly found in London; a block of Herne's Oak formerly in Windsor Park.

Cases 108-115. METAL WORK of various kinds; ecclesiastical relics, including an Irish crozier and several bells of Irish saints; vases and dishes; arms and armour.

Table Cases I and K. Matrices of SEALS, both English and foreign.

In Upright Case M is a curious piece of clockwork in the form of a ship, presented by Octavius Morgan, Esq., M.P., and a collection of horodeictical instruments, such as astrolabes, quadrants, and dials of various kinds.

In Table-Case G are ENAMELS.—German enamels of the 12th and 13th centuries; French enamels, made at Limoges, during the same period; Italian painted enamels; others painted at Limoges during the 16th and 17th centuries; a few specimens of English enamelling and jewelry, among which may be noticed the signet ring of Mary Queen of Scots; knives ornamented in various ways.

Cases 116-121. ENGLISH POTTERY.—On the upper shelves are placed green and brown glazed vessels of coarse manufacture, and of various dates, from the 13th to the 16th century. Middle shelf.



Ornamental earthenware and porcelain, including two porcelain vases made at Chelsea in 1762; a bowl made and painted at Bow, in 1760, by Thomas Craft, being the only specimen which can with certainty be referred to that manufactory; a copy of the Portland vase, made by Wedgwood; several Wedgwood medallions, and specimens of English delft. On the lower shelf, a series of ornamental paving and wall tiles, varying in date from the 13th to the 16th century.

Cases 122-125. **VENETIAN AND GERMAN GLASS.**—The former was made during the 15th, 16th, and 17th centuries, at Murano, one of the islands on which Venice is built, by manufacturers who enjoyed considerable privileges, but were forbidden, on pain of death, to reveal the secrets of their art. This glass is peculiarly elegant in shape, and from the absence of lead, very light in weight. The older specimens are generally of plain, coloured, or white glass, with borders, coats of arms, or figures, painted in enamel, and enriched with gold. Some are frosted all over; others (*vasi a ritorti di laticinio*) ornamented with lace work formed by threads of opaque white glass placed spirally, and occasionally enriched by intervening bands of coloured glass. Another variety (*vasi a reticelle*) is ornamented with a net-work formed by diagonal white threads enclosing a bubble at their intersections. The German glass is heavier than the Venetian in substance, and more clumsy in form. It was made during the 16th and 17th centuries, and is generally enamelled with figures or coats of arms. A very usual design is the Imperial eagle, bearing on its wings the arms of the states and cities which formed the Holy Roman Empire.

Cases 125-136. **ITALIAN MAJOLICA.**—This enamelled earthenware derives its name from the Island of Majorca, whence it is supposed to have been first imported into Italy, though it does not appear whether it was made in the island, or brought thither from Spain. The art was cultivated in some of the smaller states of Central Italy. Specimens are here exhibited, made at Faenza, Gubbio, Pesaro, Castel Durante, Urbino, Deruta, Caffagiolo, Rimini, Padua, Sienna, and Venice. The earlier, which date from A.D. 1480-1510, are large dishes enamelled on one side only, and painted either in strong bright colours, or in blue and yellow; in the latter case the yellow has a metallic reflection, or iridescence. The next class, dating from about A.D. 1510-1525, is smaller in size, frequently ornamented with arabesque borders, and with metallic yellow and ruby. The third, A.D. 1530-1550, is painted with subjects occupying the whole of the plate, and generally taken from Roman mythology; the colours are bright, rarely iridescent, and with a great preponderance of yellow. In the next class, A.D. 1560-1580, the drawing deteriorates, the colouring becomes dull and brown, and the subjects are frequently enclosed in arabesque borders on a white ground. In the next century Majolica almost entirely disappears, having been probably driven out of esteem by Oriental porcelain.

Cases 136-139. **GERMAN STONEWARE.**—This is a hard dense pottery, well suited to domestic purposes, and sometimes richly ornamented. It was made in the neighbourhood of the Lower Rhine. There are three principal varieties. The first, consisting usually of cylindrical jugs,

narrowing at the top, is a yellowish white, with ornaments well executed. The second is brown, decorated with coats of arms or figures under arches. The third is grey, with ornaments in relief, the ground being usually coloured blue or dark maroon. Vessels of the second class were extensively imported into England during the 16th century, and are frequently found in excavations under old buildings.

### ETHNOGRAPHICAL ROOM.

In this room are placed both the antiquities, and the objects in modern use, belonging to all nations not of European race. Any scientific arrangement has been rendered difficult by want of space ; but the objects have been, as far as practicable, arranged in a geographical cycle which proceeds from East to West, commencing with China and terminating with the Eastern Archipelago.

In the centre of the room are placed the following objects :—

A Table Case containing a selection of figures and works of art from China, Japan, and India, as well as some remarkable historical relics from New Zealand.

Three large cases of dresses in use among the Esquimaux tribes, and other objects illustrative of the late Arctic expeditions, collected by Sir John Barrow, and presented by Mr. Barrow.

A Table Case containing Peruvian and Mexican antiquities.

Against the pilasters are placed the following objects :—

An inlaid Indian cabinet.

An impression of the foot of Gaudma.

A bronze figure of Pattinee Dewa.

A fountain from the Rohilla country.

The contents of the side Cases are as follows :—

Cases 1-5. CHINESE EMPIRE AND JAPAN.—On Shelf 1 of Cases 1, 2, are clothes and military accoutrements and weapons. On Shelf 2, statues and groups of divinities and animals, in bronze, steatite, porcelain, and other materials. On Shelf 3, articles of domestic use, such as mirrors, scales, and compasses. In Case 3 are gilt figures of a male and a female divinity, taken from a private chapel at Canton. On Shelf 1 of Cases 4, 5, are musical instruments, of several kinds. Shelf 2, musical instruments, and specimens of glass and enamel. Shelf 3, porcelain and lacquered work.

Cases 6-9. INDIA AND BIRMAH.—On Shelf 1 of Cases 6, 7, are figures in marble and bronze, chiefly of the Buddhist divinity Gaudma, from Birmah. On Shelf 2, Terracotta heads from Peshawur. Shelf 3, weapons and inscribed bronze plates, being charters and grants of land. In Cases 8, 9, on Shelf 1, wooden Hindoo figures. On Shelf 2, figures of Divinities, in alabaster. Shelf 3, various objects, including ancient terracotta vessels found in cairns on the Neilgherry Hills. Over the Cases are groups in bronze of Hindoo divinities.

Cases 10-13. AFRICA.—On Shelf 1 of Cases 10, 11, wooden Idols from the Slave Coast. Shelf 2, weapons, &c., from Ashantee. Shelf 3, carved bowls formed from gourds, and weapons. In Cases 12, 13, on Shelves 1 and 2, specimens of cloth, and other objects, obtained from the Niger Expedition, and from the Slave Coast. Shelf 3, hats, saddles, &c., from various parts of Africa.

Cases 14-24. JAVA.—A collection of antiquities and more recent musical instruments, theatrical masks and puppets, all collected by Sir Stamford Raffles.

Cases 25-30. NORTH AMERICA.—Dresses, models of boats, bows and arrows, stone weapons, and other articles.

Cases 31-37. MEXICO.—Vases of alabaster and terracotta, and figures in terracotta and stone. Antiquities excavated in the Island of Sacrificios, by Captain Evan Nepean.

Cases 38-44. SOUTH AMERICA.—Ancient terracotta vessels from Peru; objects of modern use, from Chili and Patagonia. Cases 41, 42, head-dresses made of feathers, from the river Amazon, and objects from Guiana.

Cases 45-48. NEW GUINEA AND THE LOUISIADE ARCHIPELAGO.—Wigs, combs, ornaments, grass dresses, gourds, and other implements used by the Papuan races. They were chiefly collected by Capt. Owen Stanley, during the voyage of H.M.S. *Rattlesnake*.

Cases 49, 50. FIGI ISLANDS.—Clubs and weapons, fishing-nets, earthenware vessels, and specimens of cloth.

Cases 51, 52. POLYNESIA.—Implements and ornaments in use among the natives of Chain Island, Pitcairn's Island, Easter Island, and the smaller islands scattered over the Pacific Ocean.

Cases 53-56. MARQUESAS AND SANDWICH ISLANDS.—Specimens of cloth, ornaments, fishing implements, &c. In Cases 55, 56, idols, and dresses made of brilliant feathers, formerly in use in these islands.

Cases 57-61. SOCIETY ISLANDS.—The contents of these Cases are chiefly from Otaheite or Tahiti, the principal island of the group, and consist of baskets, pillows, drums, fishing implements, and cloth.

Cases 62-65. FRIENDLY ISLANDS.—On the upper shelf, baskets; on the lower, fishing-nets, models of canoes, &c.

Cases 66, 67. NAVIGATOR ISLANDS AND NEW CALEDONIA.—Clubs, axes of green stone, a tortoise-shell bonnet copied from an European pattern, and specimens of matting and cloth.

Cases 68, 69. NEW ZEALAND.—Clubs, warlike implements, boxes, and other objects of wood, with elaborate patterns, and specimens of matting made by the natives from New Zealand hemp. Above the Case, the prow of the canoe of the celebrated chief Heki.

Cases 70, 72. AUSTRALIA.—Narrow wooden shields, bomarangs, clubs and hatchets, and other implements.

Cases 73, 74. EASTERN ARCHIPELAGO.—On the upper shelf are shields, quivers, and dresses of the Dyaks of Borneo. On the two lower shelves are objects from New Zealand, presented by His Excellency Sir George Grey, K.C.B.

AUGUSTUS W. FRANKS.



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